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Congressional Control of
Navy Budget Execution:
Acquisition of the A-6F Aircraft

by

Gary Wayne Miller
June 1988

Thesis Advisor:

Dr. L. R. Jones

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Acquisition of the A-6F Aircraft

by

Gary Wayne Miller
Lieutenant Commander, Supply Corps, United States Navy
B.A., San Jose State University, 1972

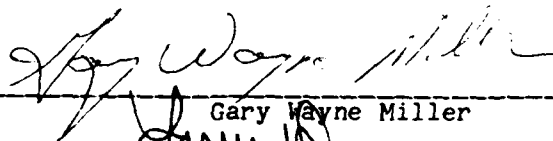
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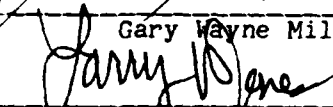
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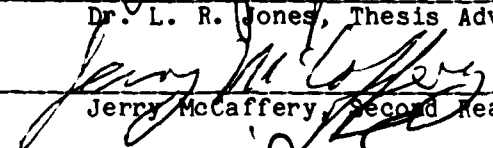
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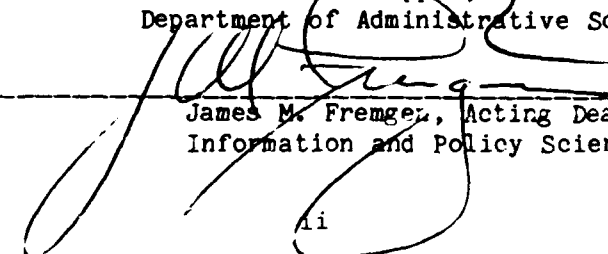

Gary Wayne Miller

Approved by:


Dr. L. R. Jones, Thesis Advisor


Jerry McCaffery, Second Reader


David B. Whipple, Chairman,
Department of Administrative Sciences


James M. Fremgen, Acting Dean of
Information and Policy Sciences

ABSTRACT

This thesis explores Navy responses to Congressional control as illustrated by the acquisition of the A-6F aircraft. Congress exercises control through the procedures of authorization, appropriation and oversight activities.

Navy responds to control by program design, justification, financial manipulation and actions to influence Congressional deliberations. A policy implementation model extrapolated from the work of Bardach is developed for application to the A-6F acquisition.

Findings that relate to Congressional controls are the dissipation of energy in attempting to control budget implementation decisions and the opportunism and fragmentation in Congressional decision making. Findings that apply to Navy responses to control are the inclusion of technical and political elements in program construction, the combination of factors to terminate programs and the distortion in measuring program success.



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I. INTRODUCTION

A. BACKGROUND

Weapons systems upgrading and improvement is an ongoing concern in the Navy. In order to meet perceived threats to national security, the armed forces must replace outmoded, worn, or useless capital assets: weapons, ships, aircraft. Due to the complex technological nature of today's weaponry, planners draft detailed strategies for managing and controlling key variables against which the acquisition of specific systems will be judged as a success or failure. Delivery schedules, performance standards and costs are the usual variables controlled to achieve successful acquisition program execution. Decision makers continually face tradeoffs, e.g. building in more capability or pushing ahead delivery schedules at increasing cost.

There are numerous other aspects to successful program implementation. The Navy is both the initiator and executor of projects. This characterization yields a measure of autonomy, but the Navy still must seek assistance from other governmental bodies to bring an acquisition plan to fruition. From the Office of the Secretary of Defense (OSD), it receives formal approval of budgets and integration of its budget requests into the Presidential administration's military, economic, and foreign policy

goals. From Congress, the Navy receives broad political support and continued funding. Therefore, the service must define, defend and execute acquisition programs in such a manner that achieves collective desired outcomes. The political context of the Navy's acquisition of weapons systems is much larger than manipulation of cost, schedule, and performance.

Since 1983, the Navy has been developing two medium attack aircraft for carrier operations as replacements for an aging weapon system. One is a variant of the A-6 aircraft, originally introduced in 1963 and upgraded 5 times previously. The sixth and newest version is called the A-6F. The other replacement is the Advanced Tactical Aircraft (ATA). It employs newer technologies to meet the kind of combat operations envisaged in the late 1990's and beyond. But the earliest this latter aircraft can enter the fleet is 1995. Given the riskiness of meeting the necessary cost, performance, and scheduling factors, Navy planners feel that date has a significant probability of not being met.

The A-6F is a bridge to the ATA. The A-6F uses the same airframe as previous models, but also employs newer armaments, sensors, and avionics controls. Full scale engineering development has been completed, and in the FY 88 budget submission, the Navy requested procurement funds for the first purchase of 12 airplanes.

In November 1987, Congress disagreed with the rationale for developing and purchasing two different attack aircraft. In the FY 88 Defense Authorization Act, it refused to authorize continued expenditures for the A-6F. But in December 1987, Congress appeared to reverse that decision. In an omnibus appropriation act for the entire Federal Government in FY 88, it agreed to the initial purchase.

Due to Congressional conflict, the Navy was uncertain about what aircraft it had both authority and funds to purchase. Initially it appeared it might proceed with both the A-6F and the ATA. Powerful members of Congress then expressed their displeasure with this decision [Ref. 1:p. 28]. In February 1988, Secretary of Defense Frank Carlucci announced that further funding of the A-6F would not be sought in the FY 89 budget. This, in effect, terminated the program. The Navy is now seeking alternatives to the A-6F.

This dichotomy of action on the part of Congress highlights a unique system of legislating national programs. Congress authorizes programs through substantive legislation, setting upper limits to expenditures. In theory, this step allows for consideration of the relative merits of the program, before it is reviewed as part of the budget. The next step is to appropriate funds for authorized programs, for Congress to allow monies to be drawn from the Treasury for programs previously authorized; in many cases the sum appropriated is below the limit in the

authorizing legislation. Again, in theory, the purpose of the appropriation decision is to evaluate the specifics of each line item of the budget submission in order to verify the accuracies of cost projections, the budgetary priority of the project relative to others, and the executability of programs proposed at funding levels requested.

This two-step process is only one of the control mechanisms by which Congress influences the formulation and implementation of national defense policy. Additional control mechanisms include Congressional oversight, investigative hearings, reporting requirements, and legislated procedural steps in the acquisition process. When the process does not work as it is supposed to, according to law, as in the A-6F acquisition case, it raises questions about how issues should be resolved between the executive and the legislature, and also within Congress. Another problem is the appropriateness of outcomes from the control process. Do controls slow down production or add additional cost to programs? Do they alter relationships between the Navy and Congress? Do they change decision making mechanisms within DOD? The issue of the appropriate level of Congressional control is open to debate. Nonetheless, the Navy must adapt to it in order to formulate and execute budgets for national defense programs.

B. RESEARCH QUESTIONS

The following questions are researched in this thesis.

- What is the nature, scope and intent of Congressional budget control implemented through legislative, budgetary, and oversight activities?
- What is the nature, scope and impact of the Navy's responses to budget control?
- What specific responses has the Navy made to Congressional attempts to influence the management of the A-6F acquisition program?
- What lessons has the Navy learned from Congressional review and oversight of the A-6F acquisition program?

C. RESEARCH SCOPE, LIMITATIONS AND ASSUMPTIONS

Implementation of national defense policy may be viewed as an ongoing process in which the Navy seeks support from the other services, from the Joint Chiefs of Staff (JCS), from OSD, from the President and Office of Management and Budget (OMB), and from Congress. Examples of these support elements include funding, formal review and approval of programs, political advocacy, logistic support, and participation in planning and design. This thesis studies Congressional controls as an expression of its growing desire to influence Executive programmatic outcomes. The intent of this study is to identify Congressional control capacities employed in budgeting, passage of substantive legislation, and oversight, and to relate these controls to Navy efforts to implement national defense policies. Specifically, the question is how did the Navy develop and administer the A-6F aircraft program in light of Congressional assertions of power and authority?

The Navy, OSD, and Congress are not the only institutions involved in defense policy implementation. Others include the defense industry, private individuals, and other various interest groups. All contribute or withhold certain elements that interlock in the formulation of successful policy execution. An exhaustive analysis would address all institutions. Only the Navy, OSD, and Congress are analyzed in this paper.

The Budget Act of 1974 altered the existing scheme for Congressional budgeting by overlaying new institutions and procedures on the old. Although Congressional Budget Committees, created by this legislation, deliberate taxes and spending by reconsidering many of the same issues as the substantive and appropriation committees, this role is not discussed. Concurrent resolutions, reconciliation, impoundment and sequestration are similarly beyond the scope of this presentation. The focus of this thesis is on the authorization and appropriation decision processes of Congress.

The assumptions of the research are:

- The reader has working knowledge of DOD's Planning, Programming and Budgeting System (PPBS).
- The reader knows the background of the Congressional Budget Impoundment and Control Act of 1974 and its impact upon Congressional budget procedures.
- The reader is familiar with the Federal Government's budget terminology.

D. METHODOLOGY

The methodology used was archival research of Federal statutes, Congressional testimony, printed media reports, as well as interviews of Department of the Navy and Department of Defense personnel in decision-making positions within the A-6F program.

E. SUMMARY OF CONCLUSIONS

The conclusions are grouped in three categories.

1. Conclusions Regarding Congressional Control

- Congress dissipates political energy in excessive control of Executive budget decisions.
- Members of Congress are opportunistic in advancing their own agendas in budget negotiation and oversight.
- Congressional micromanagement leads to unintended effects in the Department of Defense. Some of these effects appear to impede the efficiency of the Executive branch of government.
- Congress makes fragmented decisions instead of unified judgments in negotiating and controlling the Department of Defense acquisition budget.

2. Conclusions Regarding Navy Responses to Congressional Control

- The Navy must match technical justifications with political strategies to promote programs effectively before Congress.
- Under circumstances where projects are discontinued by Congress, Navy programs appear to be terminated by a combination of constraints in the political process rather than as a result of a single decision.
- Measures of programmatic success and failure are distorted in the political process due to the emphasis placed upon resource inputs instead of the intended outputs of national defense.

3. Conclusions Regarding the A-6F Acquisition

- The A-6F case illustrates the multiple strategy requirements of program negotiation and implementation

within the highly politicized environment of Department of Defense, Executive and Congressional budget decision making.

- The A-6F case illustrates budget and control problems with the Congressional two-step authorization/appropriation enactment of budgets.
- The A-6F case illustrates the politics of program survival and failure.

F. ORGANIZATION OF THE STUDY

Chapter Two details some of the controls used by Congress to regulate defense asset acquisition. These are broadly defined in two categories: budget formulation through the authorization and appropriation process, and budget execution oversight through activities such as hearings, investigations, and reports of "watchdog" agencies. Chapter III identifies how the Navy constructs policies and programs to assure their survival and successful execution. These responses to controls are institutional and programmatic in nature; the effects are exhibited in Navy organizational structure, program construction, and legislative strategies. A model of program implementation, adapted from one developed by Bardach [Ref. 2:pp. 36-37], is used as a theoretical framework for describing Navy, OSD, and Congressional interaction. Chapter Four presents the A-6F aircraft program as an illustration of how Congress influences the Navy's implementation of national defense policies. Chapter Five analyzes the impact of Congressional controls and presents the major findings of this study.

II. CONGRESSIONAL CONTROL MECHANISMS

Budgeting is a political process, a means to arrive at decisions through bargaining, compromise, and rules of procedure. As Wildavsky illuminates in The New Politics of the Budgetary Process, a budget serves many purposes: a prediction of future events, a mechanism for making choices, a statement of goals, and a contract between Congress and the Executive to spend appropriated monies for authorized purposes.[Ref. 3:pp. 1-3]. Budgeting is also intended to be policy formulation. These diverse aims suggest the difficulties that arise in building budgets, i.e., achieving agreement on the types of future events, the choices, the goals, the terms of the contract and the shape of policy. Politics serves to reconcile the many purposes intended in the budget. Because policy formulation and implementation are linked through the budget, control of the implementation process also is political in nature. Management control and implementation are the same process viewed from different perspectives.

Two Congressional control processes are analyzed in this chapter: procedural review in budget formulation and oversight of budget execution. Procedural review is the formal means for deliberating and enacting program and spending legislation into law. Authorization and

appropriation are the two step process used since 1924 to judge the worthiness of programs and to fund operations. Oversight is the term used to describe the variety of activities of Congress that delve into Executive budget implementation and management efficiency. There is considerable conjecture over appropriateness and effectiveness of these mechanisms.

A. PROCEDURAL REVIEW IN BUDGET FORMULATION

1. Authorization

The committee structure of Congress is prescribed in the standing rules for each chamber. In accordance with these prescriptions, authorization of appropriations is under the purview of the Armed Services Committees of the respective chambers. For the Senate, Rule XXV provides that all proposed legislation, messages, petitions, memorials, as well as matters relating to the common defense, the Department of Defense and its subordinate departments, military research and development, the selective service system, military personnel benefits, and other national defense issues, shall be referred to the SASC. The SASC is also tasked to "study and review, on a comprehensive basis, matters relating to the common defense policy of the United States, and report thereon from time to time." [Ref. 4:p. 19] The SASC also reviews presidential appointments to the Department of Defense. In exercising this authority, it is

empowered to authorize appropriations, call or subpoena witnesses, hold hearings, conduct investigations, and recommend statutory nominations to the Senate. The HASC has similar authority and power, embodied in Standing Rule X of the House, except for the privilege to review appointments [Ref. 5:pp. 350-351].

The committees are divided into subcommittees to further delve into programmatic and functional budget areas and issues. But, since 1981 the subcommittees of the HASC and SASC have a significantly different alignment and a somewhat contradictory viewpoint (See Appendix A). The HASC subcommittees are arrayed by a combination of appropriation account and mission area. The SASC subcommittees are divided completely along mission lines. These differing types of organization are meaningful in the context of debate on defense priorities. Since the President's budget is presented both in traditional appropriation format as well as in programmatic terms, organization determines, to a great extent, the nature of deliberation. In theory, the HASC, when reviewing its subcommittees' work, is in a position to look for redundancy of effort in DOD programs. Meanwhile, the SASC can better consider policy tradeoffs to achieve defense outputs. Because of the complexity of defense budget analysis, it is advantageous to both committees to divide the tasks of review and oversight as much as possible. But the result is to make coherent policy

analysis more difficult to achieve because subcommittees' and committees' decisions will be biased by their point of reference. Their functions influence the nature and scope of their deliberations. [Ref. 6:p. 583].

Committees and subcommittees are also divided along partisan lines. The party leadership of each chamber has the right to name the representation to each committee. The partisan composition of committees roughly reflects the relative standings within each chamber. The committee chairman is chosen by the committee itself; custom dictates that the choice be made from the majority party. This divergence of political parties extends into many facets of committee and subcommittee procedures and activities including the hiring of committee staff, the inclusion of minority views in reports, and the requirement for consultation with the minority before major decisions are announced. To the extent that parties will be distinguished by their political philosophies, the role of government, and the specifics of policy implementation, committees' and subcommittees' activities will be affected by partisanship.

Title 10 US Code, Section 138, lists the 9 categories of defense expenditure that require authorization before appropriation. The evolution of the law has meaning for a study of Congressional controls. Prior to 1959, the HASC and SASC authorized activities on a permanent basis, allowing the Appropriation Committees to decide on annual

funding levels. Since that time, over 90% of the defense budget has gradually been enveloped by annual authorization (see Appendix B) [Ref. 6:pp. 574-576].

There are a number of opinions concerning the reasons for the growth of annual authorization. Some scholars portray the Armed Services and Appropriation Committees defending their jurisdictions as defined in the standing rules of each chamber. A classical treatment of the conflict pits Armed Services in the guise of advocates of programs and increasing spending, against Appropriations, who are bulwarks against raids upon the Treasury [Ref. 3:pp. 95-100]. But, responding to their perceptions of the mandate, each committee feels that it is not implementing its responsibilities unless it guards against intrusions into its prerogatives. Thus the growth of annual authorization is a defensive maneuver, protecting the powers of the Armed Services from usurpation by Appropriations. [Ref. 7:p. 153] Others have stressed that Congress has increasingly desired to force changes in defense policy upon an Executive unwilling to seek Congressional consultation [Ref. 6:p. 576]. Still others point out the offensive clash of wills between Armed Services and Appropriation Committees to decide which body will wield the most influence [Ref. 8:pp. 227-248]. In addition, the yearly process of authorizing DOD's programs enhances individual members'

ability to craft legislation to the benefit of their constituents.

Although explanations for the process vary, the process itself is remarkably similar in both houses. After receipt of the President's budget in January, authorization legislation is introduced as separate bills in the House and Senate. The review proceeds simultaneously in both chambers, beginning with hearings at the subcommittee and full committee level, legislative mark-up, committee vote and reporting out to the appropriate chamber. Then comes floor action and vote, joint conference to resolve differences, and lastly, final vote and delivery to the President for signature into law. (The timetable, as specified in the Standing Rules of the Senate, is presented in Appendix C). Each step in this process is explained more fully below.

Hearings traditionally begin in February each year before the entire Senate and House Armed Services and Appropriation Committees. The first witnesses are the Secretary of Defense, the Chairman of the JCS, the individual service secretaries and the service chiefs. They remark, in general terms, on the posture of the defense establishment, highlights of operations of the preceding year, and notable programs in the new budget proposal. Each witness usually opens with a short 20 minute oral statement, discussing significant aspects of a prepared written

statement. Typically, longer testimony then follows, illustrated with slides or other visual aids that are duplicated in the printed transcript. Next, a question and answer session allows each member to query the witness. If a member asks a question for which the witness does not have the information immediately available, an answer is later inserted "for the record". Members also can request answers to written questions, which are appended to the testimony.

Through March and early April each year, hearings before the various subcommittees, follow a similar course. Representatives from OSD and the services, with responsibility for specific programs, testify in further detail about budgetary line items. For example, if procurement programs are on the agenda, the initial witness will usually be the Assistant Secretary of Defense for Procurement. Then separate hearings will be held for each service's program, further broken down as to appropriation type. DOD resource sponsors and the heads of the acquisition agencies "go up to the Hill" to defend the budget. For air programs, the Commander of the Naval Air Systems Command (NAVAIR) (as head of acquisition) accompanies the Deputy Chief of Naval Operations for Air Warfare (OP-05) (the resource sponsor) to testify about aircraft and air weapons acquisition. Often, the committees and subcommittees request the appearance of certain witnesses. Thus, not only do the immediate aides accompany

the flag officers, but also so do program managers who can answer questions about their particular programs.

The atmosphere of hearings appears at times to be somewhat chaotic. Staff and members arrive and leave the room during testimony. The proceedings can be interrupted by bells for quorum calls or votes on the floor of the respective chamber. Not all of the members may be present at once, either due to schedule conflicts or even lack of interest. Nevertheless, at least two members of the committee or subcommittee will be present to form a quorum. [Ref. 9:pp. 45-48]

By late April, in a year that runs according to typical schedule, hearings are completed on the authorization bill. The committee commences markup of the budget request. Markup sessions resemble hearings, but without witnesses. A committee staff member will read each line item, with a recommended funding level. If there is no objection, staff will read the next item. If there is an objection, a vote of the membership is required. The outcome of the session is that each line item has been read and the committee's recommendation is recorded to either accept the request, mark the request up or down, or eliminate the item entirely. Markup may take several days, and members consider the period quite strenuous. [Ref. 10:pp. 43-44].

The result of hearings and markup sessions is a committee report on the military authorization bill to the appropriate house, issued usually in early May. The report clearly documents where changes in funding levels have been recommended (See Appendix D). The report also explains the rationale behind the rejection of the budget request, and the logic behind the committee's decision. The report incorporates minority views on funding issues in an appendix. Perhaps as a result of the complexity of the defense budget, or of the changes wrought by the authorization committees, the reports may be 500 pages or longer.

The next step is for full floor deliberation of the legislation. This may not occur for a month or more after the committee report is issued. As scheduled by the majority leadership in each house, time is set aside for reading of the bill, debate, and consideration of amendments. Usually, several blocks of days are reserved for this task. Debate may proceed for three or four hours in the morning for three days, then break for three days, followed by three days of more debate. Amendments require either a voice vote or a recorded vote for approval or rejection. A simple majority decides the issue. Once the last amendment has been considered, the entire proposal is voted on by the chamber.

Typically, the process has fallen behind the review timetable set in the standing rules of each chamber. In practice, by late August the House has finished its authorization bill before the Senate. The Senate may amend the title of its legislation to reflect the House resolution number, but otherwise diverge in funding levels and programs authorized. A joint conference, between the House and Senate, is convened to resolve the differences.

A joint conference can only consider matters referred to it by their respective chambers [Ref. 4:p. 39, Ref. 5:pp. 654-673] Conferees, ostensibly nominated by the leadership, but in reality picked by the chairman of the HASC and SASC, meet to bring the legislation into agreement. Subconferences, divided by budget functional area (e.g., procurement), are convened; there is a considerable amount of "horsetrading" on each line item and provision that varies between the two bills. What emerges is a Conference Report detailing the original budget request, the House and Senate floor action, and the conference recommendation. Furthermore, as in the committee reports, the conference usually divulges its logic for adopting a particular position. The likelihood that reports contain justifications for committee decisions is linked to several factors: the sum of money involved, the political contentiousness of the issue, the need to influence votes

for passage, and the desire to maintain an open political system.

The conference report finally returns for action in both houses. Proceedings take the form of adoption of changes made to the bill as passed by each chamber. Amendment is not allowed [Ref. 4:p. 39, Ref. 5:p. 662]. Failure to adopt a change sends the report back to conference for more deliberation. An affirmative vote by both houses authorizes and transmits the bill to the President for signature or veto.

The legislation produced by the authorization process in recent years contained more than formal approval of programs and ceilings for the appropriation of funds. For example, the FY 86 Defense Authorization Act mandated 91 reports and studies, established new acquisition procedures and regulations, specified the general information to be contained in routine acquisition reports to Congress, asserted new personnel management policies, and also expressed the sense of Congress on a myriad of issues such as the construction of ships for NATO allies in U.S. shipyards. It also constrained DOD operations, from freezing the size of the service's headquarters staffs to prohibiting the removal of Basic Point Defense Missile Systems from Navy amphibious ships. It contained 16 titles divided into 298 sections; total page length 197 pages. The breadth of subject matter contained in the legislation, all

of which passed through the previously described process of deliberation, indicates the reliance of Congress upon authorization as a major controlling device over DOD.

2. Appropriation

The Congressional budget process is designed to provide authorization before appropriation. However, often this is not the case. Appropriation parallels authorization in time, but typically is divergent in substance and sequence of review. The authority of the Senate Appropriations Committee (SAC) is derived from Senate Standing Rule XXV, as is that of the SASC. Limiting the SAC's power to review amounts of new spending authority, is Standing Rule XVI [Ref. 4:pp. 11-12] It states that no amendment to add a new item of appropriation may be made unless it carries out a provision of existing law. Further, the SAC shall not report an appropriation bill proposing new or general legislation, or a restriction upon expenditure of funds not authorized by law. The intent to prohibit appropriation without previous authorization is evident. The rules for the House Appropriations Committee (HAC) are similar. [Ref. 4:p. 573]

An additional constraint upon both Committees is the Joint Budget Resolution, a procedure instituted by the Budget Act of 1974 that sets spending and revenue caps upon broad categories, such as defense, foreign aid, and domestic programs. The legislative calendar also contracts the

Appropriation Committees' flexibility to alter spending. The rules provide that the joint resolution be voted by 15 April, empowering the House to begin consideration of the appropriation bills. Thus Appropriations Committees find themselves fenced within the restrictions of authorizations and the Joint Budget Resolution.

The appropriations committees of both houses also are subdivided into subcommittees (see Appendix A). This guarantees some commonality of knowledge and viewpoint in their deliberations. The procedures of hearings, testimony and markup are similar to those of the authorizing committees. The thrust of the questioning is the evaluation of dollar amounts for programs, especially the validity of estimates made by the services. Hearings are conducted for groupings of appropriation accounts, but separately for each service. Thus, it is standard for a cluster of similar appropriations (e.g., Operations and Maintenance for the active and reserve forces for an individual service) to be considered at the same time, with the hearing room filled with the necessary witnesses.

Markup and reporting are similar in procedure for appropriators as well as authorizers. In the past, appropriations were traditionally divided into thirteen spending bills for the entire federal government. Thus, the HAC and SAC issued thirteen separate reports. However, in the mid-1980's for a variety of reasons, this custom has

been ignored in favor of wrapping all bills into one omnibus appropriation act. As during appropriations, detailed explanation of changes from the budget request, as well as rationale for the deviation, may be provided in the Joint Conference Report. Finally, floor action, conference action, and final adoption are required to enact an appropriation bill into law.

3. Budget Enactment Detours

The limited presentation of the budget formulation process conveys some of the awkwardness of Congressional budget deliberations. Further complicating the process are the role of the budget committees, the Budget Resolution, reconciliation, and other aspects of the Budget Act of 1974.

The budget committees review revenue, credit and spending projections provided to them by their own staff and the authorization and appropriation committees and recommend targets for each. Congressional agreement is embodied in a joint resolution (the Budget Resolution) of the House and Senate; its passage precedes the two-step authorization/appropriation process. Reconciliation is the means for enforcement of the Budget Resolution targets.

Authorization, appropriation and revenue committees are obliged to report a reconciliation bill if required by the budget resolution or subsequently in budget enactment. Recommended changes are provided in the resolution, although the committees are free to change existing law as necessary

to match the targets. The Budget Committees also perform "scorekeeping" by comparing spending in proposed substantive and appropriation legislation as it is considered by authorization and appropriation committees with the agreed upon targets and totals of the Budget Resolution. Bills that entail excessive spending can be referred back to the reporting committee. How is the determination of "excessive spending" made? In practice, the House has been less rigid than the Senate, voting not to control spending by the target limitations but by first categorizing spending as uncontrollable or discretionary. Excessive discretionary spending has been referred back to the reporting committee. [Ref. 11:p. 46]

These features render the process even more complex, even though they are designed to improve Congressional control over excessive spending. Budget resolution, authorization, appropriation, and reconciliation are not enacted in accordance with the schedule. As 1 October approaches, the beginning of the fiscal year, every agency anxiously awaits new spending authority. Typically, Congress has not met the budget deadline for all Executive agencies since 1977. In response, the presidential administration has threatened to order a cessation to routine governmental functions until Congress provides some type of funding. Continuing Resolution Authority is a detour around the impasse.

This hybrid legislation bears the stamp of contentiousness and haste, to "do something" to keep the Government operating if annual authorization and appropriation actions are incomplete. The interim measure legally authorizes funding for existing annual programs, at the same funding level as the previous year. In effect, it delays Congressional authorization and funding for proposed new program starts. Because the life of a CRA is measured in weeks or days, there may be several CRA's before passage of the final authorization and spending acts. Some form of continuing resolution authority has been required at the start of every fiscal year for DOD since 1 October 1976.

Closely allied with CRA is the omnibus funding bill, the wrapping of several, or all appropriation bills into one mammoth legislative vehicle for final and transmission to the President. Passage and presidential signature of an omnibus appropriation act is almost a forgone conclusion because of the drastic consequences of failure to pass it; a veto halts the operation of the government, creates the requirement to bring forth another interim CRA, and/or the necessity to try for a veto override. Presidential anger at this budget strategy was revealed when President Reagan vowed in his 1988 State of the Union address to not sign such a measure in his last year in office [Ref. 12: p. 4].

4. The Role of Staff

The role of congressional committee staff in budget deliberation needs to be examined separately because their influence is pervasive in all congressional procedures. Excluding the staff of the Congressional Budget Office, there are two types of staff, personal staff of the congressman or senator, and professional staff working directly for committees.

Personal staff are hired by the member. Due to the limits placed upon the size of staff by the standing rules, few members can afford to hire specialists dedicated to one issue. The House allows up to 18 staffers for its members; there is a total payroll limitation in the Senate. Personal staff tend to be young, fresh out of college, without graduate degrees, and eager to make their mark. They closely follow issues of interest to their employer, draft responses to constituent's letters, seek information by inquiry, write speeches and compose testimony. They may work for the member for only a year or two. [Ref. 9:p. 29].

Professional staff of the committees are more permanent. Their loyalty belongs to the committee, although the committee chair most likely has hired them. In addition to the bill mark-up described above, their jobs are to draft legislation, draw up amendments, write queries for information from DOD, organize hearings and witnesses and conduct extensive studies of defense related issues. In the

House, they are allowed to question witnesses at hearings; this privilege is not extended to the professional staff in the Senate. They tend to be older (average age 40), with advanced degrees in law. Some are retired military. [Ref. 10:p. 19]

The power of the professional staffs has been documented by others. They have been referred to as a "shadow government", working behind the scenes to shape national policy. As individuals, their influence upon members is profound [Ref. 13:p. 13]. One Navy liaison officer commented that they can literally tell the members what can and cannot be done in constructing legislation or drafting strategies for parliamentary maneuvers [Ref. 14]. Increasingly, both types of staffs interact with DOD action officers and program managers. As the complexity of budgets grows, so does the power of staffs to analyze and interpret issues for members, and to propose alternatives. Members' time is limited and thus they must rely increasingly on staff to review budget and program detail.

Committees can use investigative staff, including the General Accounting Office (GAO), to delve deeply into specific DOD programs prior to subcommittee review. Although this function is more related to program oversight than review, GAO surveys are relatively short term evolutions, instigated at the request of a member. From

DOD's perspective, GAO is interested in both the good and bad aspects of a program:

Their reports are occasionally complimentary, constructive and helpful where the cases warrant. Also, GAO is now operating in "real time," reporting findings back to the originator quickly...(DOD program managers) should realize GAO investigators probably have an idea of what is going on before going out to look at a program. [Ref. 9:p. 70]

B. OVERSIGHT

"Continuous watchfulness" is the term used in the Legislative Reorganization Act of 1946 that directed committees to pursue oversight over agencies and programs within their jurisdiction [Ref. 9:p. 60]. Reaffirmed by court opinion, the power of Congress to review the implementation and the affects of legislation is firmly entrenched in all Congressional committees [Ref. 15:p. 4].

Congress requests DOD to supply information through the testimony of witnesses at hearings, written or telephonic inquiry, briefings, or the submission of special reports and studies. Such reports supplement the over 21,000 pages in the justification books transmitted with the budget. DOD has held that the sum total of these requests constitutes an overly onerous burden (See Appendix E). The means for gathering information is through hearings, reports, and the use of internal investigative agencies.

1. Hearings/Investigations

Hearings play a central role in oversight, since many of the members questions concern ongoing programs. Oversight hearings are usually combined with those for substantive legislation. Hearings before the HASC in 1987 were titled "Hearings on National Defense Authorization Act for Fiscal Years 1988/1989 - H.R. 1748 and Oversight of Previously Authorized Programs" [Ref. 16].

Congress also investigates agency operations and programs as a part of oversight. They subpoena witnesses and documents, hear sworn testimony, and issue findings. Private citizens or officials of the executive branch not cooperating by supplying information, can be found in contempt. DOD's own advice to its program managers explains what to expect in an investigation:

The fact an investigation is called is apt to discredit DOD and bring adverse publicity. The position of Congress is "we are doing our job to look into this," thus accruing a degree of favorable publicity. It is not so much the form or substance of an investigative hearing that separates it from a regular one as it is the inevitable tone or climate of the proceedings. Whereas hearing witnesses or those being interviewed or otherwise asked to provide information are not expected to be public relations specialists, still the admonishment remains: don't panic, don't become defensive, stick to the facts, be candid, and try to assume a positive public relations attitude and approach. [Ref. 9:p. 69]

2. General Accounting Office/Congressional Budget Office

As noted previously under the role of staff, Congress also makes use of so-called "watchdog" agencies, in

particular, the General Accounting Office (GAO). At the request of any member of Congress, it has the power to investigate, survey, or review program implementation. At its own initiation, it conducts routine periodic audit of government operations, focusing on programs with a history of trouble, ones that have been significantly restructured, or ones over which partisan competition is intense. GAO has shed its old image as a group of accountants who audited federal programs for accurate accounting practices. They have many specialists in defense issues who examine mission requirements, test results, and whether statutes and the intent of Congress are being executed properly. They also use outside technical consultants when needed. [Ref. 9:p. 70] GAO issued 749 reports in 1987; 162 concerned DOD.

Congress also relies on the Congressional Budget Office (CBO) to study DOD. The CBO was created by the 1974 Budget Reform Act as an independent provider of budgetary analysis to Congress [Ref. 17:pp. 302-303]. Before 1974, Congress lacked the resources comparable to those provided to the executive branch by OMB and the Council of Economic Advisers. Congress did not believe that the analysis accompanying the President's annual budget proposal would be free from partisan manipulation. The intent was to set up a rival organization, loyal to the institution of Congress rather than beholdng to committees or political parties. [Ref. 3:p. 143]

Initially, CBO reviewed the administration's estimates for economic parameters, such as inflation, unemployment, and interest rates. These led to forecasts of anticipated revenues and expenditures under a variety of different budgets. It now reviews the President's budget and assesses alternatives, recommending changes in some instances. As legislation enters mark-up, CBO provides input to the decision. It also keeps score on the difference between projected outlays and expenditures of authorizations, appropriations, and the budget resolution. [Ref. 3:p. 198] In effect, CBO now presents a series of alternatives to the President's budget. Its demonstrated accuracy vis-a-vis OMB lent legitimacy to its claims of independence. Increasingly, Congress has requested special studies and analysis of defense issues. One example is Assessing the Effectiveness of Milestone Budgeting, a July 1987 study to consider ways to improve the efficiency of acquiring weapon systems [Ref. 18].

3. Reporting Requirements to Congress

In addition to tasking other agencies to report on DOD, Congress tasks DOD to report on itself. The Congressional appetite for reports and information is insatiable. The FY 80 Authorization Act required 15 special reports or studies, in addition to routine transmissions; by 1986, the demand increased to 91 special one-time reports [Ref. 19:pp. 803-820, Ref. 20:pp. 583-779]. Secretary of

Defense Weinberger considered the effort and cost to answer and prepare these requests for information so significant that he made objection to it a key part of his posture statement to Congress in 1985 [Ref. 21]. Congress subsequently ordered GAO to prepare an analysis of Congressional reporting requirements. [Ref. 22]

In the area of acquisitions, Congress has received routine reports about costs and performance since 1969. Here also, there has been an increase in the numbers of reports provided. Two reports account for most increase, the Selected Acquisition Report (SAR), and the Unit Cost Report (UCR). Fifty reports were required in 1980, but there were over 300 submitted in 1985. The number of pages in these reports totaled to 600 in 1980; by 1984, the quantity skyrocketed to more than 1700. There has been a surge in level of detail and an expansion of format requirements. [Ref. 23:p. 12] The redundancy of the transmissions has also been noted. Originally designed as an internal report for OSD only, the SAR in particular has come under much criticism as a management tool for Congress [Ref. 23:pp. 5-8].

The SAR is a comprehensive, summary status report on major acquisitions that exceed \$200 million in yearly research and development funds, over \$1 billion in yearly procurement, or have significant interest to Congress. Technical, schedule, and program acquisition cost sections

are the main divisions of the SAR. The reports show current program office estimates compared with the planning and development estimates previously used by senior officials to approve the transition of the program through the various phases of acquisition. Reasons for variance must be explained and demonstrated performance of the weapon system must be reported in the technical section. SAR's are prepared quarterly for major systems, annually for lessor ones. [Ref. 24:p. 6-15]

The UCR is part of the unit cost reporting system internal to DOD. It shows relationships of unit costs, to other data provided in the SAR. It also provides management with a periodic status of unit costs and indications of possible increases. Congress is notified when certain conditions trigger the reporting requirement. An immediate UCR is submitted if there is reason to believe the program acquisition unit cost will increase by more than 15%; the Secretary of the Navy must notify Congress in writing within 30 days. At a 25% breach of baseline, the Secretary of Defense must certify that the program is essential to national security, new unit costs are reasonable, and management can control further cost escalation. [Ref. 9:p. 77] Failure to do so automatically terminates authority to obligate funds for the program. This restriction was inserted in the FY 83 Defense Authorization Act by Senator

Sam Nunn; the breached program is colloquially known as a "Nunn Buster" [Ref. 25:p. 3-36].

Although the intent was to improve Congress' ability to detect cost growth and performance shortfalls in weapons, the reports' limitations have caused some to criticize their use. The reports are complex, and may appear to be inaccurate and inconsistent. The information reported is not timely. Since content has been rigidly controlled by legislation, neither OSD or the Navy has been able to modify the reports to be more understandable. Therefore, because they record historical information, the reports do not reflect the actions taken by the service to return an acquisition program to its baseline assumptions. The formats are strict, failing to reflect the uncertainty inherent in applying new technologies. The reports focus on prior events, thus to an extent limiting their utility to predict or control the future. [Ref. 23:pp. 5-8]

C. CHARACTERISTICS OF CONGRESSIONAL CONTROL

There are many ways to characterize Congressional control mechanisms. The awkwardness of the system has already been mentioned under budget detours. Other process characteristics include:

1. Appropriation/Authorization Mismatch

If agreement is required for a budget to become law, and the starting point of deliberation is the same

presidential budget, how does Congress appear to speak with two voices? The Constitution mandates that both chambers of the legislature concur in the passage of specific legislation. The outset for authorization and appropriation in both chambers is the President's budget. But there is no strict procedural mechanism that matches appropriation to authorization. This is left to the four committees in the two houses to coordinate, and to DOD to appeal if the separate processes yield differing results. Unauthorized programs do get money, and authorized programs go unfunded. In FY 85, appropriation committees approved \$3 billion for programs unauthorized, or authorized at a lower level in the defense substantive legislation [Ref. 26:p. 3]. For FY 86, the amount was \$5.7 billion; in FY 87, \$2.7 billion [Ref. 27:p. 2]. The reasons for these disconnects range from organizational differences between the Armed Services Committees and the Appropriations Committees, procedural variances between the same Committees, haste to meet deadlines, or outright conflict and rivalry over spending priorities.

The mismatch confuses DOD about Congress' intention regarding a program. Either authorization or appropriation may exist; but both may not be required to legally obligate funds [Ref. 28:p. 2-38]. Realistically, to proceed with operations without both legislative mandates risks antagonizing two Committees of Congress. In cases where a

committee record supports a conclusion that there was opposition to a DOD proposal, DOD may initiate a resolution of the conflict. An agreement is sought from the Committees whose explicit approval is missing, to sanction the transfer of funds or to authorize the program. Failure to reach an understanding usually prevents expenditures for the project. But an alternative does exist to ignore the disconnect and proceed in accordance with the last vote of Congress. In this latter case, appropriation is interpreted as simultaneous authorization. New programs may be initiated or previously approved projects may continue operations. For example, on 4 March 1987, Secretary Weinberger notified the HASC and SASC that due to the delay in pursuing informal agreements for appropriated but unauthorized programs, DOD would begin execution of the FY 87 programs in this category within 30 days. Subsequently, funds were released in mid-April 87, without the concurrence of the two Committees. [Ref. 28:pp. 8-9]

2. Delay

Procedural delay is built into the system. When there is no agreement on budget totals or policy goals, budget deliberation grinds to a halt. Substance overwhelms process. Contentious issues such as the Strategic Defense Initiative, arms control, or anti-satellite weapons prolong debate over DOD authorizations and appropriations until agreement within Congress or with the White House is

reached. Disagreements over deficit reduction matters also has led to postponement and befuddlement since the passage of Gramm-Rudman-Hollings [Ref. 3:pp. 250-251]. DOD has not begun its fiscal year with a full budget on time since FY 77. All thirteen funding bills have not been passed on time since 1960. One critic views Congress as trying to accomplish more than is possible; budget, authorizations and appropriations are squeezed into 9 months. A delay in any of these, backs up the others as well:

The hegemony of the budget process over the rest of the legislative agenda occurs in several ways. First, there just is not sufficient time for Congress to adopt a budget, authorization bills, and appropriations bills before the start of a fiscal year. Congress is trying to fit too many activities into too little time. Any delay in one step creates a domino effect later in the year. The budget resolution is taking longer to adopt (reflecting the lack of consensus in the country on national priorities). This delays consideration of the authorization bills, which in turn delays consideration of appropriations bills and forces Congress to resort to continuing resolutions for spending measures...Congress fails to meet its deadlines because it has too much to do.... [Ref. 6:pp. 580-581]

3. Institutional Conflict

Conflict is always present to some degree between chambers, between committees, and within subcommittees. Previously described under Authorization was the gradual extension of that process to the whole of DOD's budget. One rationale for this development was a bid for power by the Armed Services Committees at the expense of Appropriations. The substantive committees have a traditional bias for increasing funding [Ref. 3:p. 194]. Therefore, more

frequent review of substantive legislation translates into both closer control of defense programs and more possibilities to lobby Appropriations for higher spending. But the lobbying may not be the only indication of conflict. Appropriators may respond by not funding all authorized programs. Parliamentary fights then break out in floor debate because amendments to appropriation bills are first proposed as vital to national security, then opposed as poor policy or as budget busters. Wildavsky sums up the competition as follows: "...the appropriation committees exemplify the American practice of opposing ambition with ambition" [Ref. 3:p. 19].

4. Limited Focus

Congress often appears to focus on the inputs instead of the outputs of budgeting. Its easier to count guns, people and dollars than to count units of national defense. Although the orientation of subcommittees along mission areas is an attempt to deal with this problem, analysts view the results at best as mixed. Congress still has difficulty gaining an overall perspective on an issue. It tends to view programs in isolation, instead of across programmatic or service lines. Counting the building blocks of defense is easier than seeing how they fit together. [Ref. 8:pp. 227-248].

Congress prefers to exercise financial and programmatic oversight at the expense of policy oversight.

Art defines financial oversight as dealing with the efficiency of spending money, and programmatic oversight as questioning the effectiveness of programs [Ref. 8:pp. 227-248]. Policy oversight focuses on the need for programs. Are specific missions being served or are they strategically sensible? He has cataloged questions posed by the committees of Armed Services and Appropriations of both Houses along the lines of financial, programmatic or policy subject matter. He shows that policy oversight comes in a distant third in Congressional priorities. His reasons for this can be summed up as a lack of political incentives. Policies do not get congressmen re-elected, but defense contracts awarded in his district might contribute to this goal. Coupled with the difficulties in tracking policy changes through DOD, it is easier for Congress to argue over where the dollars flow. As Art explains, "The impact of policy oversight is too general and diffuse, both on a legislators career advancement and on those objectives he holds for public policy." [Ref. 8:p. 240].

5. Duplication and Blurred Role Distinctions

Congress is redundant in budget negotiation and oversight. The 1974 Budget Act added a third orbit of deliberation for the budget. Although the phases should be complementary, the result aggravates conflicts between Committees. Armed Services annually authorizes programs. Appropriations increasingly allocates money without regard

to authorization. The Budget Committees tread over the same detailed issues considered settled by the other two organizations. Thus conclusive action never seems to be taken. Issues once settled, bubble up again seeking another compromise. DOD witnesses are burdened with many preparations and appearances to give testimony.

Distinctions between committees become blurred when each proceeds on its own agenda. As the roles reverse, rationales for the two-step process are called in to question. Are budgets any better if authorizers consider line item cost estimates at the expense of policy review? Are policy issues more firmly understood if appropriators focus on substantive rather than affordability concerns? When committee's merge their roles, imperfect operational duplication partly explains the authorization/appropriation disconnect discussed previously. In other words, deliberating legislation more than once augments the chances of arriving at different programs and different funding levels. But DOD exacerbates the problem. It ignores committee functional boundaries when it announces its intention to proceed with programs without authorization. [Ref. 6:pp. 581-582]

6. Micromanagement

"Micromanagement" is a term used to describe the intense, line item by line item scrutiny Congress gives budgets, and the resulting legislative instructions

concerning how to spend approved funding. Congress micromanages the DOD budget in many areas. Former Sen. Barry Goldwater (R-AZ) scolded the legislators about the adjustments to over 1900 line items between the two houses in the FY 87 Authorization Bill [Ref. 29:p. 54]. The SASC professional staff points to the increase of the Defense Authorization Bill from nine pages in FY 70 to 165 pages in FY 85, and the conference report growth from 33 pages to 354 pages in the same period [Ref. 6:p. 591]. Wildavsky cites the increase in Armed Services hearings from a total of 17, with 1400 pages of testimony in 1960, to 80, with 11,246 pages in 1985 [Ref. 3:p. 386].

Some of the impetus for this development already has been discussed; i.e., the availability of staff to thoroughly research issues, personal objectives of Members seeking re-election recognition, displays of committee initiative and aggressiveness in reviewing programs. Other reasons include real or perceived waste in the executive branch, skepticism of the ability of government to assure programmatic outcomes, complex issues requiring solutions that must be debated democratically, and conscientious efforts to insure limited resources are utilized effectively in the interest of national security. [Ref. 9:pp. 60-61]

From DOD's perspective, Congressional monitoring of activities is expected to continue. At question is the severity of oversight. Review results in detailed line item

changes, second guessing, and outright challenging of DOD budgetary motives. The result is the constant need for budget justification on numerous grounds, extensive reporting requirements, and the frustration of "...someone else telling us how to fight a war" [Ref. 9:p. 61].

Beyond the effects upon staff interaction in budgeting, Congressional micromanagement of DOD has influenced programmatic outcomes. The SASC professional staff states that Pentagon justifications place too much emphasis upon resource questions, diverting attention from strategic planning. Congressional micromanagement flows down through the bureaucracy as OSD then the services produce ever-increasing amounts of data on how programs are functioning, often without addressing long range goals. Furthermore, the staff says:

The line-item by line-item budgeting embraced by Congress in recent decades has created perverse incentives in the defense acquisition system. By budgeting for a specific weapon, rather than by providing funds to accomplish the task or mission for which the weapon is intended, the Services are encouraged to shield marginal programs from scrutiny. The funded weapon amounts to their only solution; to lose it is to lose the money for the mission. As a result, the Services tend to fix and patch whatever problems emerge on that weapon rather than scrap it, try to sell an alternative approach, and obtain approval for new funds. [Ref. 6:p. 593]

As trust and consensus is eroded in budgeting, so are the fundamentals of sound planning.

7. The Diffusion of Power

The budget control process has diffused power throughout Congress. No longer does one committee or even one influential group of congressmen have final say over the shape of DOD's budget. Victories in the subcommittee, are overturned in the full committee, on the floor, or in conference. The power of the chairman has decreased also, as noted by several commentators. [Ref. 3:pp. 191-192] Increasingly, legislators individually seek influence over DOD's budget. The result is the dissipation of political energy as the authorization and appropriation legislation is subjected to more and more floor amendment. For the Senate alone, amendments to the DOD authorization bill have grown from 16 in FY 77 to 83 in FY 87 [Ref. 29:p. 54].

Information is power, too. Those that have it, including the professional and personal staffs, are in a position to use it to achieve their aims. There is evidence that the power of seeking information from, and oversight of, DOD is something actively sought by individuals and committees not formally tasked with this function [Ref. 13:pp. 12-13]. For example, the Senate Governmental Affairs Committee achieved much notoriety with its 1983 "spare parts Christmas tree." Ornaments on the tree were overpriced spare parts with prices that DOD paid appended to each. The

committee then opened hearings on the alleged abuses because it was convinced that the SASC would not address the issue.
[Ref. 30:p. A2]

D. CHAPTER SUMMARY

This chapter discussed selected Congressional budget control mechanisms. Because budgeting is a political process, the rationale for budget control also is political. Controls are essentially procedural in nature, revolving around authorization, appropriation and oversight activities. Control in the authorization and appropriation processes is similar. Both include hearings and testimony in committee and subcommittee from executive branch witnesses, budget bill mark-up, committee reports, floor debate and initial vote, joint conference votes, final floor votes and transmission of enacted legislation to the President. Oversight includes hearings, investigations by Congress, examination by "watchdog" agencies, and requirement for submission of reports from CBO, GAO and the executive branch. Problems with control include the authorization/appropriation mismatch, delay in passage of budget legislation, institutional conflict within Congress, limited focus of budget review, duplication of effort, micromanagement, and the dissipation of political energy in the diffusion of Congressional power. Chapter III will

explore some of the impact of these controls upon Navy
program implementation.

III. NAVY RESPONSES TO CONGRESSIONAL CONTROL

Chapter II described and analyzed selected Congressional budget control mechanisms. The control process was divided into two categories: procedural review of budget formulation and oversight of budget execution. Characteristics of controls also were discussed. Navy responses to Congressional controls are analyzed in this chapter. Responses are analyzed in the context of budget and program implementation. The acquisition process is outlined, commencing with a synopsis of the acquisition cycle. Navy responses are divided into four categories: features of program design, efforts to communicate program justification, financial maneuvering, and direct influences upon deliberations. Finally, a model of program implementation is developed including criteria for testing the model in the case of the DON acquisition of the A-6F aircraft.

A. THE ACQUISITION PROCESS

Acquisition of a weapon system is a complex procedure with many implementing directives within DOD and its sub-organizations. The synopsis below is drawn from Chapter I of Navy Program Manager's Guide, 1987 edition [Ref. 25:pp. 1-1-1-17].

1. The Relationship to PPBS

The acquisition process and PPBS are closely tied in structure, decision processes, and documentation. Integration attempts to insure against a mismatch in time and level of acquisition plans and funding. The acquisition process begins when the services conduct threat analysis to drive planning in the PPBS system. The intent is to relate the decision to acquire military hardware to the external threat to the nation's security. This analysis leads to establishment of operational requirements. Thus, if the Navy determines that it needs a particular strike aircraft that can survive the combat environment projected for the next decade, then the operational requirement is established to meet this need. Both the threat analysis and the operational requirement reflect the need to meet the war-fighting capabilities of potential adversaries.

2. The Structure of the Acquisition Process

Once the military requirement is established, the acquisition process proceeds through six phases.

- Concept Exploration.
- Demonstration and Validation.
- Full Scale Engineering Development.
- Production and Deployment.
- Operational Support.
- Upgrade, Modification, Replacement.

During the Concept Exploration phase, the service solicits and evaluates alternative concepts, in cooperation with industry, in-house Navy laboratories, universities, and

federally funded research centers. The concept takes the form of a technical feasibility model which can be subjected to test and evaluation. The Demonstration and Validation phase yields designs and advanced developmental models which test several promising concepts found during the first phase. Demonstration of systems and technology is emphasized to ascertain suitability of concepts to meet the operational requirement. A single concept is usually chosen out of this phase to proceed to the next step. In many cases, the prime contractor is chosen also, although some programs have provided for competition throughout the first three phases of the acquisition cycle. The goal of the Full Scale Engineering Development phase is to produce a fully tested, documented, and production design. Constant testing, evaluation and redesign are the hallmarks of this step. Prototypes are built and pilot production may start. Production and Deployment introduces the hardware to the fleet. The Initial Operational Capability Date (IOC) is the certification date that the weapon system is on-line, ready for use by operational commanders. The final two phases provide for support throughout the life span of the system and upgrades to delay obsolescence. Major upgrades to meet new threats, or to take advantage of new technologies, begin again with threat analysis and operational requirement generation. The A-6F, was such a program, a substantial improvement to the A-6E aircraft.

3. Decision Making Mechanisms

Each phase of the acquisition process terminates in a milestone decision. The purpose is to review program progress to decide on program continuation. Approval or denial of the operational requirement is referred to as the Milestone 0 decision. A favorable milestone decision represents authority for program inclusion within the service's POM. For major acquisition programs, the decision belongs to the Secretary of Defense, who promulgates the results in an Acquisition Decision Memorandum (ADM). Advising him is the Defense Acquisition Board (DAB), chaired by the Under-Secretary of Defense for Acquisition (USD(A)). Major members of the DAB include the Vice Chairman, JCS (Vice Chair), the Secretaries of the Army, Navy and Air Force, Assistant Secretary of Defense (Comptroller) and Director of Program Analysis and Evaluation (see Appendix F).

The DAB is the primary forum of decision making within OSD for acquisition programs and policies. Its duties include promoting coordination and cooperation within DOD of matters related to acquisition, recommending procedures to implement policy initiatives, and considering matters related to the milestone review process. DAB recommendations to the Secretary of Defense become the ADM's which start, continue, or terminate acquisition programs.

B. RESPONSES TO CONGRESSIONAL CONTROL OF THE ACQUISITION PROCESS

The acquisition process can be understood as a policy implementation process, wherein the Navy accepts the legislative mandates of authorization and appropriation and proceeds to acquire weapons systems. Responses to controls then are identified with the characteristics of program implementation. Two categories of response to Congressional control involve acquisition programs directly: design and justification. Two other categories, financial maneuvering and influence of deliberation, do not fit perfectly into the context of acquisition because they apply to operational programs as well. Nevertheless, the concept of policy implementation is useful in describing Navy responses to Congressional controls.

1. Responses to Control Manifested in Acquisition Program Design

Program design refers to the range of concepts employed by the Navy to structure an acquisition program. Selection of these concepts is called formulation of an acquisition strategy. Their purpose is to improve control over the three variables by which weapons systems acquisition is judged as success or failure: weapons system performance, delivery schedule, and cost. Discussed below are the elements of baselining, streamlining, non-developmental items, survivability, integrated logistics

support, the type of contract, and the role of competition. An acquisition strategy manages these decision variables.

a. Program Baselineing

Baselineing is a mandatory management concept in DOD. DOD Instruction 5000.45 elaborates:

Major program baselining is a technique used to enhance stability and control cost growth of major programs...A stable program environment provides the foundation for effective program management. [Ref. 31:p. 1]

A baseline is defined as an agreement between the participants in program management that establishes minimum system performance requirements, provides a description of the technical characteristics and configuration, sets a firm schedule of events, and creates a projected unit cost goal. Primarily, the participants are the Navy, OSD, and the test and evaluation agency. Performance requirements are parameters considered critical to the success of the weapon's mission, expressed in definite and measurable terms. The schedule of events includes milestone decisions, the Initial Operational Capability date, and the first deployment. Unit cost goals include reasonable contingency amounts. These objectives are first articulated in the Demonstration and Validation Phase of the acquisition cycle. Baseline agreements form part of the documentation reviewed by the DAB in making recommendations for milestone decisions to SECDEF. Although DOD has required consideration of streamlining techniques

since 1980, Congress codified the practice by amending Chapter 4 of Title 10 U.S. Code in 1986 [Ref. 32:p. 3913].

A baseline breach occurs when a system performance parameter is not expected to be met, when a schedule date will be missed by 90 days, or when unit cost growth exceeds 15% for a system under development (5% for a system in production). Changes to baseline are permitted only under unusual circumstances, and then only with the concurrence of SECDEF. Such circumstances include a change in the threat, budget instability, test results, or Congressional action. Breaches of cost estimates requires submission of a quarterly SAR and unit cost exception report to Congress, as discussed in Chapter II under reporting requirements.

b. Streamlining

Acquisition streamlining is a key strategy concept. It is outlined in DOD Instruction 5000.43:

The purpose is to promote innovative and cost-effective acquisition requirements and acquisition strategies that will result in the most efficient utilization of resources to produce quality weapon systems and products. Acquisition streamlining is based on the concept that by applying pertinent contract requirements and allowing early industry involvement in recommending the most cost-effective solutions, the Department of Defense can reduce the cost and/or time of system acquisition and life cycle cost without degrading system effectiveness. [Ref. 33:p. 1]

Acquisition streamlining techniques invoke contract prescriptions that are relevant and cost-effective for the particular acquisition. These requirements include

specified performance requirements, contract requirements in the statement of work, specifications for materials, contract data requirements, and contract terms and conditions. Tailoring is the process of evaluating and modifying the individual requirements to determine their pertinence to the objective of reducing cost and time. Streamlining tools include requirements discipline, specification tailoring, computer-assisted document preparation, source selection techniques, contracting to reduce technological risk and cost exposure, or streamlining clauses in contracts. The importance of industry's close involvement in developing and applying this strategy is emphasized.

c. Non-Developmental Items

The Navy is committed to a policy to institutionalize Non-Developmental Item (NDI) considerations during all phases of the acquisition process [Ref. 34:p. 1]. NDI are items of supply meeting one of the following criteria:

- available in the commercial marketplace.
 - previously developed by an agency of the U. S. Government or that of an ally.
 - an item meeting the conditions of 1 or 2 above, but requiring only slight modification for the requirements of the procuring agency.
 - any item currently being produced although not commercially for sale, or not yet in use.
- [Ref. 32:p. 3917]

Such "off-the shelf" type items do not require the lengthy development cycle to prove their technological

application. Therefore, time is shortened for fielding a weapons system, money is saved as a result of the shortened time span and reduced development costs, and state-of-the-art technology is used to satisfy user need [Ref. 35:p. 7]. The Navy's goal is to make NDI considerations the rule rather than the exception in acquisition [Ref. 25:p. 3-52]. Program managers are expected to aggressively pursue procurement of "off-the-shelf" type items and integrate them into the acquisition of weapons systems.

Congress concurred in this assessment of NDI, and incorporated the policy into Section 2325 of the FY 87 Authorization Act [Ref. 32:pp. 3917-3918]. Furthermore, Congress required both OSD and GAO to report on DOD efforts to implement NDI policies, describe the effectiveness of their actions, and recommend further legislation in the area.

d. Survivability

Survivability is the capability of a weapon system to carry out its designated mission in a combat environment [Ref. 25:p. 4-72]. It is the combination of factors that determine the probability of a hit from enemy fire and the ability to carry out the mission after sustaining damage. DOD Instruction 5000.2 requires the consideration of survivability in all phases of the acquisition cycle [Ref. 36:encl. (4):p. 4-1]. An analysis will include the criteria for combat effectiveness, the

effects of enemy weapons, susceptibility to electronic measures, and the protection of personnel operating the system.

DOD recognizes that Congress and the public have been increasingly critical of the development of expensive weapon systems that are vulnerable to "cheap kills" or to specific threats [Ref. 25:p. 4-72]. In addition to the requirement to document survivability analysis, the services must include an explicit threat statement in any justification for a major system new start, submit analysis in the milestone review packages, and incorporate survivability factors in the testing program. Survivability against the full spectrum of warfare threats has been emphasized, including both nuclear and non-nuclear combat scenarios. Furthermore, each system must be periodically re-evaluated during its operational phase for upgrade or modification in light of new survivability concerns.

e. Integrated Logistics Support

As explained under baselining, establishing the performance characteristics of a weapon system is a major consideration from the outset of the acquisition process because of the relationship with the two other decision variables, cost and schedule. Program managers are reminded that approximately 70% of a system's life cycle costs are fixed in the Concept Exploration phase because of the chosen concepts and performance thresholds [Ref. 25:p. 1-8]. The

choice of the desired characteristics also affects the Test and Evaluation Master Plan (TEMP), the document that specifies where, when and how testing will be conducted. The results of testing will form the criteria for deciding the commitment of further resources or to advance a program from one acquisition phase to another. The TEMP is drafted as early as possible in the acquisition process to reduce acquisition risks and estimate the capability of the system to meet all technical and operational requirements [Ref. 37:p. 2].

Among the factors to be tested are objectives of logistics support. Even though logistics support requirements may not have been a part of the basis for determining the initial operational requirement for a weapon system, they are elevated to the same importance of consideration [Ref. 38:p. 2]. Logistic support measures result in attainment of desired readiness and support objectives, i.e., the weapon system's ability to deliver the output for which it was designed within constraints upon operational funding, manpower, test and diagnostic equipment, and spare parts availability [Ref. 39:p. 3-1]. The tool to achieve the objectives is systems engineering. Systems engineering is defined as:

...the application of scientific and engineering efforts to: (1) transform an operational need into a description of a system configuration which best satisfies the operational need according to the measures of effectiveness; (2) integrate related technical parameters

and assure compatibility of all physical, functional, and technical program interfaces in a manner which optimizes the total system definition and design; and (3) integrate the efforts of all engineering disciplines and specialties into the total engineering effort. [Ref. 39:pp. 4-1-4-2]

The general topic of logistics support includes many specific areas. Reliability and maintainability are examined in more detail because of their use in the A-6F acquisition case.

(1) Reliability. Reliability is "the duration or probability of failure-free performance under stated conditions" [Ref. 40:encl. (1):p. 1]. One of its specific measures of performance is mean-time-between-failure. For an aircraft, this is measured as the average time between component failures and is not limited to events that result in designating the aircraft unable to fly.

(2) Maintainability. Maintainability is:

...the ability of an item to be...restored to specified condition when maintenance is performed by personnel having specified skill levels, using prescribed procedures and resources, at each prescribed level of maintenance and repair. [Ref. 40:encl. (1):p. 1]

Its most common measure is Mean-Time-To-Repair, the average time to restore the aircraft to 100% capability.

Maintainability concerns go beyond the time factors that affect diagnosis, removal and installation of the failed part. Included also are the costs of manpower, training, and maintenance of facilities to repair aircraft and components.

f. Types of Contracts

The contract establishes the relationship between the government and industry. It defines objectives, responsibilities, and authority of each party, as well as provides flexibility for modification [Ref. 25:p. 4-23]. There are two general types of contracts: fixed-price and cost- reimbursement. The major distinction is in industry's obligation and risk. Fixed-price contracts place the greatest obligation and the most risk upon industry to deliver a product at an agreed price. Cost-reimbursement type contracts places the obligation upon the government to reimburse or share costs, in some cases regardless if any product is ever delivered. It is DOD policy that the appropriate type of contract be employed consistent with the facts and circumstances involved [Ref. 41:p. 16.1-2]. Factors to consider before deciding on the type of contract to pursue include the changing requirements of the contract, the nature of the technology, the government resources committed to monitor and control the contractor, and the predicted accuracy of the government's cost estimates.

There are several sub-types of fixed-price contracts, distinguished by their incorporation of the profit incentive for the contractor. For example, the firm fixed-price sub-type (FFP) establishes the greatest profit incentive to control costs and deliver the product at the agreed time. Failure to comply could result in a

determination of default and subject the contractor to financial penalties. [Ref. 25:p. 4-23]

Increasingly, the Navy employs FFP contracts in the Concept Exploration and Demonstration and Validation phases of the acquisition cycle. FFP contracts streamline the process because they are easier to award and administer than any other contract type; negotiation is kept to a minimum and the cost of monitoring performance is low. FFP contracts also enhance competitiveness within industry because contractors themselves determine the products they deliver [Ref. 25:p. 4-24]. The competitive factors include both cost and quality of the delivered product. But this development is not without its critics. Industry complains that they are forced to assume a disproportionate share of the technological risk and the cost responsibility:

...the superior bargaining position of the government enables contracting officers to limit the government's cost exposure and to push as much of the risk on the contractor without regard for the goal of a contract that is fair and reasonable to both parties. [Ref. 42:p. 47]

Furthermore, GAO has notes that the use of FFP contracts may not be warranted when both the government's cost estimates are unreliable and the quantity of the product to be delivered is not established [Ref. 43:pp. 63-64]. The end result is increased cost when the Navy is required to "bail out" the contractor in order to receive the desired product.

g. Competition in the Acquisition Process

The drive for more competition in defense systems acquisition comes from several sources. OSD has been committed to competitive procurement since promulgation in 1981 of the Acquisition Improvement Program under the auspices of then Deputy Secretary of Defense Frank Carlucci:

The value of competition in the acquisition process is one of our most widely accepted concepts. We believe that it reduces the costs of needed supplies and services, improves contractor performance, helps to combat rising costs, increases the industrial base, and ensures fairness of opportunity for award of government contracts. [Ref. 44:p. 10]

DOD Instruction 5000.2 now requires the program manager to address a plan for competition in all phases of the acquisition cycle [Ref. 36:pp. 7, 9-10]. Certification of the plan is under the purview of the Competition Advocate General for the appropriate service. Competition Advocates have been appointed at most buying activities to review contracts for conformity to competitive procedures and to foster competition at every level of procurement.

Congress augmented DOD's efforts when it enacted the Competition in Contracting Act of 1984 (PL 98-369). The act requires the use of competitive procedures in order to obtain full and open competition, eliminates preference for formal advertising which puts competitive proposals on a par with sealed bids, eliminates the exceptions justifying negotiations, and limits the use of non-competitive procedures [Ref. 45:pp. 1175-1203]. Finally, as noted

under types of contracts, the Navy has increasingly turned to FFP type contracts because of the cost and quality advantages derived from competition.

The embrace of competition has almost drowned out any warnings concerning its appropriateness. The search for a "second-source" for weapons previously procured on a sole-source basis is an area of competitive procurement that has been analyzed [Ref. 44:pp. 10-21, 35]. Although the threat of seeking a second source of supply can keep costs of sole-source supplies from escalating, 14 interlocking conditions have been found for which second-sourcing is not indicated.

- Small procurement quantities or erratic yearly lot sizes.
 - Short duration of production.
 - Shallow slope of the learning curve (i.e., as cumulative production doubles, a comparatively slow rate of decrease in costs).
 - Relative complexity of the weapon system.
 - Employment of immature or "leading edge" technologies.
 - Strong potential for other Government or commercial applications.
 - Research and development funding primarily developed from private sources.
 - Large cost of unique tooling/facilities.
 - Large cost of transferring Unique Government owned tooling/equipment from the original contractor to the second source.
 - Large unused capacity by the original contractor.
 - Lack of commonality of production line output affecting the maintenance concepts of the weapon system.
 - Long production lead times.
 - Significant involvement of subcontractors with the original prime contractor.
 - Large degree of contractual complexity.
- [Ref. 44:pp. 19-21]

A case study of the AIM-7F Sparrow Air-to-Air Missile illustrates the pitfalls of encouraging too much competition through second-sourcing [Ref. 46:pp. 28-35].

h. Summary of Responses to Control in Acquisition Program Design

The above acquisition regulations and strategies clearly have themes in common: the driving force to hold down costs, improve schedules, and prevent "gold-plated" performance of weapon systems (exceeding reasonable levels of a weapon system's measures of effectiveness, building in more capability than necessary). Cost, schedule and performance are the variables by which acquisition programs will be judged as successes or failures within DOD. Alternatively, program instability, increasing cost, decreasing performance, and delay are the classic symptoms of program dysfunction. Therefore, a prime goal is to identify the factors in the acquisition process which affect the variables and bring them under the control of the program manager and other policy implementers.

The Navy uses various acquisition strategies to market programs to Congress. For example, because Congress has expressed its preference for NDI, it is reasonable to expect Navy witnesses to proclaim NDI (and its adjunct strategy, commonality between weapons systems) as major Navy efforts to address Congressional concerns over costs and performance. Furthermore, by indicating that costs,

schedule, and performance are under control, the Navy is laying the foundation for political support that translates into program survival and funding through the authorization/appropriation process.

Moreover, detailed plans imply the readiness to commit funds quickly to accomplish programmatic objectives. To the extent that this quality is real, orderly and rapid obligation is a guarantee that Congress will not later change its mind and try to recapture the funds. The threat of recapture is not imaginary. Since FY 85, Congress has required both DOD and GAO to annually report on unexpended balances in all appropriation accounts. The impetus for reports was disbelief of DOD budget projections, and distrust of DOD intentions to effectively obligate or return funds to the Treasury [Ref. 47:pp. S6787-S6791].

2. Program Justification--Educating Congress

a. Military Inexperience

From the Navy's viewpoint, Congress needs continuous re-education about DON missions, hardware capabilities, decision processes, organization, and role in national defense. One reason, as commentators have long noticed, may be the ever decreasing numbers of Senators, Representatives and staff with military experience [Ref. 48:p. 37-48]. Many Navy program managers agree with that assessment. [Ref. 49:p. 19]. OSD advises prospective witnesses not to assume that budget briefing material

provided by DOD will be read prior to a hearing, and therefore not to over estimate the knowledge of the Members [Ref. 49:p. 5].

b. Keep It Simple

Most DOD guides for delivering Congressional testimony impress upon witnesses the "KIS" principle (Keep It Simple) when discussing the performance characteristics of their weaponry. One guide for military officers briefing Congress advises that program descriptions should be framed along the lines of baking a single chocolate chip cookie. Elements of the story include discovery of grandmother's recipe, a trip to the supermarket to buy the ingredients, and baking a batch. Costs are analyzed as those related to the ingredients: electricity for the oven, gas for the car, the baker's salary, and incidental expenses. [Ref. 50:p. 5]. Alternatively, OSD suggests that expert backup witnesses be carefully instructed and rehearsed in the type and character of testimony to be provided [Ref. 49:p. 4].

An example of how to keep an issue simple in the minds of congressional decision makers is provided by a helicopter program manager. When he visits a Member, he likes to leave a small model of his aircraft in the office anteroom. He has found that subsequent visitors, waiting for their appointments, like to play with the model by spinning the blades and moving the wheels. The Member is

then reminded that people waiting to see him are aware of his support for U.S. Marine Corps. [Ref. 51]

c. The Lack of Military Wisdom

Several researchers have found that flag officers resent Congressional direction because Members lack military expertise. Both staff and Members are viewed as "gifted amateurs"; their positions on military issues are not credible because the decision makers are largely self-taught [Ref. 52:pp. 29-42]. After interviewing top officials in the services about their perceptions of the Congressional Military Reform Caucus, two researchers concluded that much opposition centered around alleged charges of a lack of military knowledge and wisdom among the members of Congress [Ref. 13:pp. 1-2].

d. Summary of Strategies to Educate Congress

What is the significance of simple explanations and justifications of programs? Do simplistic parables lead Congress to increased understanding, or increased willingness to change DOD policy proposals? Are professional disagreements about complex issues such as force composition and tactics founded on perceptions of incompetence in military affairs? It is difficult to answer these questions with certainty. Nevertheless, DOD wants to express program rationale in language understandable to Congress, and explaining the rationale may employ tricks of storytelling. Promotional efforts serve the purpose of

winning general program acceptance and approval; and, in terms of authorization and appropriation, support may result in Congressional action at the levels proposed by DOD.

3. Financial Manipulations

There are two sub-categories under this heading: financial tactics that gain more funding for a specific program, and tactics that gain general sympathy for the vicissitudes of budget execution.

a. Tactics to Gain Funding

(1) Advanced and Multi-year Procurement. DOD Instruction 7200.4 establishes the policy to fully fund procurements in annual appropriation acts [Ref. 53:p. 1]. The objective is to provide funds at the outset for the total estimated cost of a program so that Congress and the public are fully aware of its financial dimensions. Most weapons systems are procured in yearly increments, with contracts based on the quantities authorized and appropriated for the particular year. Quantities vary because of tradeoffs in DOD's proposals, and because of politically dictated outcomes of the Congressional budget process. Advance procurement for long lead time items and economic order quantity procurement (multi-year procurement) may provide exceptions to this policy.

The typical budget justification for advance procurement is used to obtain budgets for weapon system components, parts and materials whose lead times are

significantly longer than normal and for procurements that must be funded in an advanced timeframe to maintain a planned production schedule. Multi-year procurement expands advance procurement through multi-year contracts to purchase more than one fiscal year's program increment of components, materials and parts. The objective is to obtain the economic advantages of large order quantities. Multi-year procurement commits both Congress and DOD to buying specific quantities of weapons over a number of years, and in some instances to incur high penalty costs for contract cancellation. In theory, the strategy takes advantage of longer production runs, greater stability in numbers produced, and efficiencies of long-range planning and investment by industry [Ref. 53: encl. (2):p. 2-1]. Among the factors considered before employing this budget approach are cost avoidance, the stability of design and funding, and the confidence in price estimates and contractor capabilities. [Ref. 54:pp. 5-39-5-43] Advanced and multi-year strategies often are built into overall acquisition plans of large weapon systems, for example the M-1 Abrams Tank, the B-1B strategic bomber, the Trident class submarine, and the Nimitz class aircraft carrier. [Ref. 54:p. 5-43]

(2) Reprogramming. Reprogramming refers to:

...changes in application of financial resources from the purpose originally contemplated and budgeted for, testified to, and described in the justifications

submitted to the congressional committees in support of fund authorizations and budget requests. [Ref. 55:p. 2]

DOD policy statements indicate that at times Congress understands where rigid adherence to the justified amounts in budget enactments may unduly jeopardize the effective accomplishment of programs in a businesslike and economical manner [Ref. 56:p. 1]. Unforeseen technical requirements, changes in operating conditions, revision of price estimates and wage rate adjustments all require flexibility to adapt.

Reprogramming may save time if the administrative permission to act occurs within DOD; actions not involving change from the purposes justified in budget presentations may be approved by the service secretaries, thus accelerating modifications to the FYDP. Nevertheless, reprogramming procedures enable Congressional retention of control over budget execution. Prior Committee approval is required for funding of increases in quantities of designated major weapons systems or for minor systems known to be of Congressional interest [Ref. 55:p. 2]. Notification is required for transfers exceeding thresholds, such as \$5 million in a procurement account or \$2 million in a RDT&E account. The increasing Congressional review and approval of budget detail in line item format has multiplied the number of reprogramming requests generated. The President's budget each year routinely includes reprogramming requests. [Ref. 57:p. 60].

(3) Supplemental Appropriation. Supplemental appropriations are another means of getting funds from Congress. Returning to Congress mid-year to ask for more money is politically risky because it may carry the stigma that the service does not know how to manage the money that was already given. On the other hand, Congress can often be persuaded to vote more funds if the circumstances justifying the request are beyond the control of a prudent manager. The Navy more than once has returned for additional money for fuel for ships and aircraft when contingency operations in response to a crisis have gone over conservative budget projections.

(4) Pork Barrel. Members of Congress sometimes employ criteria in budgeting decisions to reward their local districts. This is a logical outcome of the electoral process. Classical treatment of "pork barrel" legislation begins with a discussion of pressures brought to bear by various interest groups, and proceeds through explanation of the service to the public interest [Ref. 7:pp. 88-91]. The legislative strategy of tailoring program proposals to meet the needs of a particular clientele, described by Wildavsky [Ref. 3:p. 101], connects with Members' desires for re-election. Thus, "pork barrel" budgeting is tied inevitably to policy formulation and implementation.

Several factors outlined in Chapter II under characteristics of Congressional controls, show the effects

of pork barrel politics on policy design. Increased influence of staff enables Congress to review proposals in specifics. Amassing of budget detail provides the means for the type of micromanagement that shifts programs to serve local interests. This, coupled with opportunities from a redundant budget review process, results in policies that are often narrowly focused. Because legislative majorities are needed to assure funding over a period of years, Executive agencies arrive at strategies that spread the benefits of spending. The Executive takes advantage of institutional behavior of Congress to insure enactment of programs.

Program approval is expedited when it offers something for everyone. A naval officer in OLA calls the legislative arena the "wampum society, the key to a Congressman's vote" [Ref. 14]. John Lehman was accused of "pork barrelling" when he lobbied for the strategic homeporting program. Senator Goldwater facetiously said that after Lehman's testimony, he would love to see a Navy homeport in Arizona! [Ref. 58:p. S10583]. Spending in home districts also creates pressures when DOD tries to cut back. In 1985, Senator Gary Hart (D-CO) joined with Dr. Lawrence Korb, Assistant Secretary of Defense for Manpower, Installations and Logistics, in lamenting the legal and administrative hurdles Congress imposes on base closures [Ref. 59:p. 25]. A Navy legislative liaison summed up the

situation when he said, "Much of what passes for Congressional micromanagement is pure pork" [Ref. 14].

b. Circumstances That Gain Congressional Empathy

The second sub-category of financial manipulation is a tactic that gains understanding for the mutability of budget execution. This is the case where heroic attempts to remain in budget are made, but the situation can not be retrieved. Most often this occurs in the operational accounts when international crises force the service to spend money that was not budgeted. Twice in the 1980's, the Navy has been in budgetary extremis caused by events in the Persian Gulf. In FY 80, the Navy took a number of steps, including delaying ship overhauls, to retain obligational authority in the O&MN account to fund Iranian contingency operations. The routine appropriation lapse into the "M" account was postponed for two years to ascertain final expenditures before seeking a special appropriation to match budget authority with outlays. In FY 87, the Navy indicated to Congress that it would absorb the additional costs of Persian Gulf operations (fuel, spare parts, travel for minesweeper crews, hostile fire pay, to name only a few). To make up the difference, there has been much juggling of the books. According to RADM Seely, Deputy Comptroller of the Navy, reduced budgets in the shore establishment has paid for many of these items. He says one

other outcome was a sympathetic hearing in Congress when the O&MN accounts for FY 89 were briefed. [Ref. 60]

c. Summary of Financial Manipulations

What is the significance of financial manipulations of the budget? The tactics of reprogramming, multi-year and advance procurement, and supplemental appropriations requests are bids by the Navy for program stability in accordance with its implementation objectives. They assure the level of funding is in agreement with the service's POM, and delivery of weapons is in accordance with the FYDP. Reprogramming and supplemental appropriation may also fall into the realm of "damage control," i.e., attempting to restore programs to funding levels previously cut back by Congress. Alternatively, both tactics may be employed as a means to seek clarification about Congressional intent when an appropriation-authorization disconnect exists.

The tactics of taking advantage of pork barrel spending and uncertainty in budget execution have more generalized goals related to program survival. To the extent that programs develop a momentum driven by special interest groups from the defense industry, organized labor, or local communities seeking job and revenue spinoffs, legislators find it unpalatable to risk defeat in the next election because they voted against funding a DOD program that promised to meet special interest goals. The immediate

objective is to spread Government largess as widely as possible, to prevent substantial Congressional opposition from developing by exploiting the implied risk of defeat at the polls. Similarly, the bid for empathy in coping with uncertainty creates an atmosphere of friendliness, trust and benevolence in which programs stand to gain more political support against termination, if not more funding.

Lastly, as discussed under program design, reprogramming and supplemental appropriation have a latent quality that the intended uses of the funds are well planned and that they can be obligated in an orderly manner. This DOD guarantee of its capability to spend money quickly and efficiently duels with Congress' momentary desire to see funds spent wisely or not at all. But the DOD objective is for long term program survival.

4. Responses that Seek to Influence Congressional Budget Deliberations

The Navy regulates contacts of its personnel with Congress. The Navy's Office of Legislative Affairs (OLA) and the Comptroller of the Navy (NAVCOMPT) are buffers between the service and the legislature for passing information in both directions. There are informal means to educate prospective witnesses about the pitfalls of Congressional testimony. The Navy also encourages flag officer contact with individual Congressional Members and staff. Each of these features is expanded below.

a. The Role of NAVCOMPT and OLA

The Navy splits responsibilities for legislative liaison between two offices [Ref. 61:p. 1]. NAVCOMPT coordinates relations with the Appropriations Committees of Congress. The Navy empowers OLA as the focus for Congressional relations and legislative liaison for all other committees. Both transmit to Congress reports, written responses to inquiries, and answers to questions submitted for the hearing record. OLA also has the following duties:

- Develop, coordinate and process Navy actions relating to proposed legislation, Executive Orders and Presidential Proclamations.
- Develop, coordinate and process Navy actions relating to Congressional investigations and other matters affecting relations with Congress.
- Provide Members with information concerning plans and programs which affect their respective states, districts and committee business.
- Supervise, coordinate and make arrangement for the presentation of statements, testimony, briefings and reports to Members and committees of Congress by military and civilian personnel.
- Monitor and evaluate Congressional proceedings and actions affecting the Navy. Disseminate pertinent information to DOD officials.
- Coordinate the release of classified information to Congress.
- Supervise travel arrangements for Members when designated a responsibility of the Navy.
- Maintain continuous liaison with Congress, OSD and other governmental agencies in connection with the above duties.

[Ref. 62:pp. 2-3]

The naval officers assigned to the Congressional Liaison Offices of OLA, physically located on Capitol Hill, are the personnel who come into daily contact with Members of the

Armed Services Committees and personal and professional staff. Both offices brief prospective witnesses in hearings and investigations about current topics of interest to Congress. The flow of information is not in one direction; both offices relay inquiries from Members and staff to the appropriate organizations within the service. Navy policy is that "Navy components will make maximum information available promptly to the Members of Congress and congressional committees and their staffs...." [Ref. 61:p. 2] Complete or interim replies to inquiries must be forwarded in five working days.

b. The Pitfalls of Congressional Testimony

Although preparation for testimony can be extensive, education about Congressional processes and procedures can be informal and fragmented. For example, there is no official DOD handbook on how to testify before Congress. But, Congressional Involvement and Relations. A Guide for Department of Defense Program Managers is a resource publication of the Defense System Management College which "gives the guy who has just come from years of operating in the field, wearing flight gear or pushing troops, . . . something of substance he can use right away" [Ref. 9:p. 5]. The advice in the "Lessons Learned" segment is empirical, based on the experiences of witnesses and interviews with Members and staff of Congress (see Appendix G).

Two aspects of the control of information is the need for consistency in what is presented to Congress, and the need to support the current "official" position. Regarding the former, the military places great value on being accurate and consistent in its testimony. As the Congressional Involvement and Relations guide explains, "A pitfa'll to avoid: Congress hearing different things on the same subject from OSD, the services, and the contractors" [Ref. 9:p. 7]. Other researchers have found that DOD's own informal guidance, passed by word of mouth, is that prior preparation, taking backup experts along, knowing what is of immediate concern to committees, and knowing the political implications of testimony, are all important considerations before testifying [Ref. 49:pp. 4-6]. SECNAVINST 5730.11B is more explicit: "There should be common preparation for appearances before the Armed Services and Appropriations Committees...The development of presentations as a unified and purposeful package is of paramount importance...." [Ref. 63:p. 3]

Support of the official position is considered to be of prime importance:

It is expected that witnesses will carefully avoid volunteering views differing from the budget, either on or off the record. While direct questions at hearings must be answered frankly, a witness who feels that he must set forth a personal view inconsistent with the President's budget will also point out that the President's judgement on the matter was reached from his overall perspective as the head of the Government and in the light of overriding national policy. The witness should make clear that his

personal comments are not to be construed as a request for additional funds. [Ref. 24:p. 4-9]

As noted previously, OLA also prepares Navy witnesses to appear before Congress. The nature of the preparation can be philosophical. A Navy Congressional liaison officer says that the Navy has an obligation to answer questions truthfully and thoroughly as part of building a contractual relationship with Congress [Ref. 14]. If Congress asks the right type of question (indicating some understanding of acquisition procedures and the tactics for weapons employment, or the rationale for the use of military force, etc.) then the Navy has the responsibility. Otherwise, simplistic questions (grandstanding, seeking media exposure, muckraking) deserve simplistic answers.

c. Encouraging Personal Contact

Urging high level contact with Congressional Members and staff is a strategy that builds an image of openness and an atmosphere of friendliness. Through OLA, the Navy operates a program called Project Outreach. Flag officers from outside Washington are encouraged to seek a visit to the office of the Representative or Senator from the district where their command is located. The genesis of Project Outreach in mid-1987 may have been the perceived dislike of the Chief of Naval Operations (ADM Carlisle Trost), and then Secretary of the Navy (James Webb) to keep close contact with Congress as the previous occupants of

their offices (ADM James Watkins and John Lehman, respectively). Before the visit, the flag officer is briefed about any specific concerns or interests the Member may have; afterwards the admiral is debriefed. The same OLA liaison explains that he sees the program as a means of "putting the 'consumer' in touch with the decision makers." [Ref. 14].

5. Summary of Responses to Acquisition Process Control

Responses to controls have been presented in four categories: program design, justification, financial manipulation and influence over deliberations. Examples of program design strategies include baselining, streamlining, NDI, survivability, integrated logistics support, contract types and competition. Program justification is the efforts invested to educate Congress about Navy missions, hardware capabilities and procedures in light of perceptions of inexperience and lack of expertise. Examples of financial manipulations are advance and multi-year procurement, reprogramming, supplemental appropriations, taking advantage of "pork barrel spending" and circumstances that illustrate the mutability of budget execution. Finally, the Navy regulates the contacts its personnel have with Members and staff by focusing liaison through OLA, educating prospective witnesses about Congressional procedure, and encouraging informal flag officer briefings.

C. A MODEL OF PROGRAM IMPLEMENTATION

The purpose of using a model of program implementation to analyze the A-6F acquisition is to provide insight into the budgetary and oversight relationships and functions of political institutions. A model provides a framework for understanding the actions and motivations of institutions and political actors as they carry out their roles in budgeting. The complexities of budgeting may be simplified and analyzed more carefully through comparison to the model, which leads to discernment of the forces that shape programmatic outcomes.

1. Bardach's Model

An implementation model developed by Bardach defines the process of program implementation as one of the logistical assembling of various actions and players to produce desired programmatic outputs. Semi-autonomous institutions or groups become contributors of inputs to program implementation. The process is political in that it is characterized by bargaining and persuasion. Institutions involved include both governmental and private, formal and informal. They are either solicitors or providers of resources. Their motivation to participate is related to their desire to influence and benefit from outcomes. Bargaining and persuasion take the form of "game-playing" whereby performance and action are delivered or withheld from the strategy assembly process based on the perceived

and desired results of the game. Because a programmatic outcome is designed during policy formulation and is assumed by participants to be achievable, the terms of cooperation and resource sharing are at issue in the bargaining process. In Bardach's view, organizations contribute or withhold strategic participation to gain or avoid blame, responsibility or scrutiny, and are often defensive in motivation. [Ref. 2:pp. 36-37]

2. An Extrapolated Model

An application of Bardach's model begins by identifying the purposes of DON strategies. Strategies are tailored to fit the structure of weapon acquisition programs and the procedures for their enactment by Congress. Moreover, in the highly charged political atmosphere of OSD and Congressional decision making, programs must appeal to the political objectives of the decision makers to remain in the budget. Thus another purpose for implementation strategies is to acquire elements of support needed for programmatic survival.

a. Program Implementation: A Gathering of Components

Program implementation is a process of assembling the correct components related to increasing political feasibility. The procedure is analogous to the construction of a policy "machine" that manufactures program outcomes. The original legislative mandate is a blueprint.

Legislative approval and funding are parts of the schematic. The machine may be assembled from scratch or built from parts of another program. Congressional control is the key feature that influences the gathering and assembly of components.

What are the actions that the Navy seeks? First, the Navy needs authorization and appropriation for its budget from Congress, because without these, programs do not exist. Other components are intelligence assessments and analysis from the intelligence community in order to formulate operational requirements, war-fighting strategy and tactics developed under the JCS to integrate the weapon into national defense policy, and assistance and services from industry because they provide the manpower and production facilities to turn weapon blueprints into hardware. Furthermore, the Navy requests facilities and assistance from the other services, and cost/benefit analyses and technical services from OSD. Above all, the Navy needs political support, the type of support that provides stability in program direction and funding.

b. Stability

Stability is a key component because it impacts heavily upon the variables of cost, performance and scheduling. The variables interlock so that adjustment to one affects the others. For example, if concern for program affordability forces an adjustment to product delivery

(i.e., buying smaller quantities), the result can be increasing unit costs above the established baseline. Similarly, if operational testing reveals weapon system performance weaknesses, a decision to seek further refinement of the technology delays the introduction of the weapon to the fleet and usually increases cost. The Navy constructs some acquisition programs to enhance stability of performance by minimizing technological risk, for example including non-developmental items and commonality in acquisition strategies.

But stability in political support and funding is made all the more difficult by the necessity of relating policy formulation to implementation. Policy implementation is not cleanly separated from policy formulation. The sharp dividing line is not present as Congress requires annual review of previously approved authorizations and appropriations. Most programs are revisited every year in briefings and testimony to legislators and staff. Few decisions to proceed with program development are final. There is potential for a lack of long term commitment to any policy.

c. Programmatic Goals

What are the Navy's programmatic goals? In addition to a weapon system that meets baseline cost, performance and scheduling criteria, program survival is paramount. Programs are the building blocks of the POM

process. They represent the details of force structure to be employed in the nation's defense. Programs that are cancelled in development require substitution in the war-fighting strategy. Reformulation of the strategy itself also may be needed. Furthermore, program survival is an indication of political success, which enhances service autonomy and independence from OSD.

d. Autonomy

The components of approval and support rest in the hands of many different parties, all of whom are somewhat independent. The autonomy and separation of powers between the legislative and the executive branches is rooted in the Constitution. But the independence of the services from OSD, JCS, or the presidential administration is heightened by the POM process where individual programs are proposed and approved by the services, and then reviewed by OSD. As noted by Hobkirk, "...the pluralism of the American political process requires the independent voice of each Service be part of the debate" [Ref. 64:p. 107]. Further evidence of autonomy is provided by the Carlucci acquisition program administration initiatives of 1981. The initiatives decentralized decision making to the service acquisition executives and empowered them with responsibility and accountability for program administration. [Ref. 65:pp. 341-351]

The autonomy of the services is an important feature of the program implementation strategy assembly process. The Navy asserts independence by establishing its ownership of a program. The service then solicits political support from other organizations. The Navy also assumes the leading role to defend its programs. Ownership, in turn, typically produces a strategy that is offensive in nature. The Navy pursues successful achievement of program objectives. The support organizations solicited by the Navy are influenced by defensive and control considerations to participate in policy implementation, avoiding scrutiny, blame or responsibility if a program develops symptoms of dysfunction.

e. Avoidance of Implementation Problems

Within the context of achieving national defense objectives, the Navy acts to prevent project delay, excessive cost, and underperformance.

(1) Project Delay. Delay lengthens an acquisition process that is measured in years from conception to fruition. Planners manipulate the complexity of acquisition plans to shorten schedules. For example, the A-6 took 6 years to go from initial design competition to fleet introduction (1957-1963). The A-6E variant took only 3 years (Aug 69-Nov 72). A new wing for the aircraft, made from composite materials, will take about 2 years for delivery. [Ref. 66:pp. 427-428] Delay from the political

process only exacerbates the long timetables already present.

(2) Cost Overruns. Cost escalation also is to be avoided. As explained in discussion of requests for supplemental appropriations, asking for more funding carries the latent perception of mismanagement. Programs are held up to public scrutiny, charges of incompetence are made, and investigations by "watchdog" agencies commence. The stigma of perceived mismanagement also impacts other programs, eroding the base of political support for the Navy's budget.

(3) Underperformance. Lastly, the Navy wants to avoid weapon system underperformance (failing to achieve the desired measures of military capability). Weapons that do not work as advertised generate criticism from Congress and the public. This increases demand for expanded control of DOD acquisition and budget execution policies. For example, outlined under survivability, the services' failure to achieve measures of survivability performance for particular weapons caused OSD to require more documentation for testing and analysis.

Underperformance can be an unintended outcome of budget negotiations, the acceptance of lesser capability to achieve funding and program survival. Nevertheless this type of compromise is an extreme strategy because reduced capability may require adjustment in tactics and the war-fighting strategy that generated the operational

requirement. Program stretchouts, a DOD response to reduced funding, also fits in with underperformance since slower weapon deliveries translate into less military capability within the planned timeframe.

f. Synopsis of the Extrapolated Model

Program implementation can be described as a strategy assembly process. The Navy establishes ownership of programs by soliciting contributions of support components from OSD, Congress, and other organizations. Participants react offensively or defensively, seeking gain but avoiding blame and responsibility by asserting control over program outcomes. Measures of successful implementation include achievement of baseline cost, schedule and performance parameters, and, above all, program stability and survival. Simultaneously, the Navy attempts to evade project delay, cost increases and underperformance of the weapon. The service also wishes to minimize external control over budget execution.

3. Criteria for Applying the Model

Three criteria to judge the application of strategies by the Navy in attempting to achieve A-6F program implementation are as follows:

- Effects of institutional autonomy and independence.
- Evidence of successful assembly of strategy components to achieve program survival, stability and success.
- Evidence of DON avoidance of project delay, cost increases and underperformance.

D. CHAPTER SUMMARY

Navy responses to controls imposed in the acquisition process were analyzed in this chapter. Responses were structured into categories of program design, justification, financial manipulation and actions to influence Congressional deliberations. A policy implementation model, extrapolated from the work of Bardach, was developed for application to the A-6F program in the next chapter. The model depicts the Navy as an autonomous assembler of strategy components, pursuing programmatic success and avoiding failure. Three criteria were identified to evaluate the effectiveness of strategies employed by the Navy in the A-6F acquisition.

IV. ACQUISITION OF THE A-6F INTRUDER II

Chapter II described the context of Congressional control. Chapter III outlined Navy responses. A model for understanding Navy adaptation was developed and criteria were identified to test the appropriateness of Navy acquisition strategies. The purpose of this chapter is to present the case of the A-6F acquisition program as an illustration of how Congress exercises its influence over budget execution.

Firstly, the genesis of the A-6F upgrade is discussed. Following the initial presentation to Congress, a primary concern identified by the legislators is low production rate assembly line operations. The period of 1984-1986 is reviewed, focusing on Congressional concerns over cost and the strategies the Navy employed to avoid mismanagement. The FY 88 budget deliberations are discussed along with the change in budget climate and the focus of the debate on affordability. This led to an authorization-appropriation mismatch for the A-6F and resulted in OSD's termination of the program. Finally, conclusions about control of the A-6F procurement are presented.

A. THE A-6F--DESCRIPTION AND PROGRAM GENESIS

1. Description

The A-6 Intruder aircraft was originally designed as an all-weather, carrier-borne, low-level attack bomber for delivery of nuclear or conventional ordnance [Ref. 66:pp. 427-428]. Introduced in 1963, over 600 have been built by Grumman Aerospace Corporation of Bethpage, Long Island, New York. It has a crew of two, the pilot and bombardier/navigator sitting side-by-side. The latest version is the A-6E which entered use in 1970. The fleet inventory is about 350 aircraft. It has a top speed of 700 knots, a ceiling of 12,900 feet, and an effective combat range of 875 nautical miles. In 1978, the Target Recognition and Attack Multi-Sensor (TRAM) was installed to integrate detecting, tracking and weapons delivery. The heart of TRAM is a laser designator for delivery of several types of laser guided ordnance. In addition, TRAM allows the A-6E to accept target designation from another aircraft or from a ground observer. A typical weapons load is 28 500lb bombs or 3 2000lb bombs. The A-6E can also carry Sidewinder missiles for limited air-to-air defense, Harpoon missiles for stand-off attack against ships, and the HARM missile for use against enemy surface-to-air missile batteries.

The A-6F Intruder II is the next variant of the aircraft. Also built by Grumman, the basic airframe is not changed, but increased combat capability is achieved with

upgraded avionics, weapon stations, and engines. A new multi-mode radar improves target acquisition, recognition, and tracking. Additional weapons stations allows for simultaneous carrying of the Sidewinder missile and an air-to-surface weapons load. The cockpit is entirely redesigned. A "Heads-Up" type instrument display, in common with the F-14 fighter, allows the pilot to look through the canopy instead of glancing down at a panel. New communications and navigation equipment, as well as an upgraded electronic warfare suite, complete the avionics upgrade. Increased thrust from two General Electric F404 engines counterbalances the increased weight from the weapons load. To enhance survivability, the nose of the A-6F was redesigned to present a smaller radar signature. Also, fire detection devices throughout the airframe, self-sealing armored fuel lines and void-filling foam between the airframe and the fuel tanks are installed.

The A-6F was developed under a sole-source, fixed-price contract for \$497.8 million. A total buy was established at 150 aircraft. There were to be purchases of 12 each in FY 88, 18 in FY 89, 24 in FY's 90-91, and 36 in FY 92. Unit cost was set at \$28.2 million. The initial prototype aircraft flew on 25 August 1987.

2. The A-6F Program Justification and Structure

The genesis of the idea to upgrade the A-6E was a report from the Blue Ribbon Oversight Committee on Strike Aircraft, a panel formed by the Navy in 1983 to assess hardware requirements and capabilities for all naval and marine strike aircraft missions. To lend credibility to any major decision to change the current direction of the Navy's aircraft acquisition program, the panel solicited ideas and proposals from industry. Grumman's response was an offer to enhance the A-6, with development costs estimated between \$750 million - \$1.2 billion.

But, it seemed clear that a completely new design, incorporating new technology, was going to be needed sometime in the future. The Navy was already pursuing an effort in this direction, called the VFMX. The committee's report suggested scrapping it and starting again on a new design.

It would take many years to introduce the advanced aircraft (called the Advanced Technology Aircraft or ATA) into the fleet. A reasonable estimate was after 1995. To bridge the gap, Grumman's development proposal was attractive. An upgraded A-6 appeared to be the best solution to span the interval to the ATA. The upgrade would include features that increased its reliability, maintainability, and survivability in combat. Life-cycle costs savings were

estimated to be in the neighborhood of \$1 billion over continuing procurement of the A-6E.

Two other factors affected the decision to procure 150 A-6F's. The Blue Ribbon Committee proposed that the number of A-6's increase from 12 to 20 per air wing. For its part, the service had plans to stand up the 13th and 14th air wings in FY's 84 and 88 respectively, to match growth in the carrier force to 15 ships. More A-6's per carrier as well as more carriers in total meant increased procurement. Therefore rather than buying increasing numbers of an older model A-6, procuring an upgraded aircraft appeared justified from a force modernization viewpoint.

Increasing the lot buy would also pay dividends to the Navy in decreased unit costs. Yearly procurement had fluctuated wildly in the early 80's, from a low of two in 1980 to eight in 1983. Congress was partly to blame for these fluctuations. It had cut the program in some years. But, as Vice Admiral Wesley McDonald, Deputy Chief of Naval Operations for Air Warfare, confessed to the HASC in 1982, the Navy shared some of the responsibility because its proposed FY 83 buy of eight aircraft was not at the most economical rate [Ref. 67:Part 3:p. 410]. The lowest unit cost per airplane is achieved at a production rate of 12 or more per year. This estimate was confirmed both by the Navy and CBO in 1984 [Ref. 68:Part 2:p. 232].

Any decision to upgrade the A-6 would insure that Grumman remained the largest supplier of aircraft to the Navy. The company was already operating five production lines. In addition to the A-6E were the F-14A Tomcat air superiority fighter, the E-2C Hawkeye advanced early warning aircraft, the C-2A Greyhound carrier-onboard delivery plane, and the EA-6B Avenger electronic countermeasures aircraft. In addition to these five lines, Grumman was heavily committed to developing two upgrades to the F-14, the F-14A(Plus) and the F-14D. Therefore Grumman was certain to maintain its leading position in the naval aircraft industry.

Assuming Congressional support for the upgrade, one question facing the Navy in 1984 was how to transition to the new aircraft? Would the A-6E production line need to be shut down for two to three years to tool up for the upgrade, therefore delaying the time when total A-6 aircraft inventory would match the Blue Ribbon Committee's recommendation? Or could production be smoothly integrated so that the Navy could purchase a minimum number of A-6E's for FY's 84-87, then commence the purchase of the upgraded version in FY 88? The service decided on the latter alternative. Six A6-E's would be bought each year; beginning in FY 88, 12 A-6E upgrades would be purchased.

In summary, the Navy was proposing to buy an improved model of a workhorse aircraft, an upgraded A-6E, as

an interim measure while developing a completely new weapons system, the ATA. By relying upon proven technology, the Navy hoped to hold down costs and expedite fleet introduction. The improvements would emphasize increased reliability, maintainability, and survivability in combat. The chosen aircraft is built by Grumman Aerospace, a company that already is an major provider of planes to the Navy. Because of the need to expand the inventory, it was desirable to continue to buy the A-6E while the upgrade version was in development. Purchases of the older airplane, which were already below the most favorable production rate, would continue at a low level. Production rates would rise with introduction of the upgrade. These are the essential features surrounding the Navy's acquisition of the A-6F in 1983.

B. THE A-6F IS PRESENTED TO CONGRESS

Armed with the Blue Ribbon Committee's report, the Navy began pursuing validation of mission need and approval of the aircraft's development from OSD. A copy of the report was also provided to the Appropriation and Armed Services Committees. Therefore, although specific funding was not being requested in the FY 84 budget for the A-6 upgrade, Congress was aware of Navy intentions. In 1983, Navy witnesses were questioned about the wisdom and feasibility of the planned acquisition. The main issues of

Congressional concern were enumerated; those issues remained constant throughout the life of the program.

1. Affordability: Too Many Production Lines

From the beginning, affordability was an area of contention. But the issue was not the cost of developing the upgrade, rather keeping the A-6E line open. Because the plan called for such low rates of production, Congress wanted to know why it was necessary to keep procuring the older aircraft. As Mr. Justus White, HASC professional staff member, asked Vice Admiral McDonald:

Mr. WHITE. Does it make sense to operate three inefficient lines instead of two efficient lines? (The A-6E), EA-6B and F-14 lines are all in the same company. At least two of those aircraft are in an inventory surplus position right now.

Admiral MCDONALD. I think the total picture, Mr. White, is in total capabilities. You can save money maybe, but you are going to give away certain capabilities (which) we feel in our honest and professional judgement are very difficult to do and maintain the war fighting capability we are tasked to perform in the future. [Ref. 67:p. 421]

A similar view was expressed by Secretary of the Navy Lehman before the SASC:

Senator GOLDWATER. Last year this committee expressed concern over the large number of Navy aircraft production lines in operation. There were 13 of them and this year there are 16.

Of those 16 production lines, 10 are producing fewer than one aircraft per month. In seven instances the rates are so low that the entire overhead burden for a year is distributed on just six or fewer aircraft....

Each year it seems we add new production lines and draw down existing ones. Given the current budgetary pressures we face, what steps are you willing to take to reduce the number of Navy aircraft production lines?

Secretary LEHMAN. Senator, that is another management dilemma. All of what you say are valid points, that low rate production gives you higher unit cost.

In the case of Grumman, where we actually have five different production lines each producing at very low rates, in fact, the overhead is shared among all the programs so that the problem of low rate is not as bad as it might otherwise be were a contractor producing just one airplane...However there is a countervailing consideration...It is better to have a warm production line, even at six a year, as a hedge against having to surge in wartime than to buy out a program and close down the line. So in effect we are investing a little bit in wartime mobilization (capability) or a surge base mobilization (capability).... [Ref. 69:Part 2:p. 1081]

2. The Impact of Other Aircraft Acquisitions

Meanwhile, in keeping with the intent of the Blue Ribbon Commission's recommendations, the Navy requested funds and began development of the follow-on, new technology attack aircraft, the Advance Technology Attack aircraft, or ATA. Description of this aircraft remains classified. But at this time, support for its development appeared to be present in Congress. Significantly, Congress felt that the Navy should work for a common view with the Air Force on the ATA's development. This decision reflected Congressional reluctance to pursue two advanced attack aircraft designs. Therefore Air Force-Navy cooperation was mandated in the FY 87 Authorization Act [Ref. 32:p. 3840].

Temporarily, the A-6F program was drawing support because of problems in a competitive acquisition, the F/A-18 Hornet strike fighter. The F/A-18 was just entering the fleet as a replacement for both the A-7E light attack aircraft and the F-4J fighter. One aircraft doing more than one mission was a conceptual leap in force planning. But

the F/A-18 was suffering from several weaknesses, primarily cost overruns and underachievement of planned range and payload. These problems were the subjects of sharp questioning in Congress about the Navy's plans to correct these deficiencies. Suspicions were raised that the Navy was consigning the aircraft to the Naval Reserve as a sign it had given up on overcoming the difficulties [Ref. 67:Part 3:p. 423]. As a result, the A-6F concluded FY 84 budget deliberations on a positive note, as an alternative to the apparently flagging F/A-18 [Ref. 70:pp. 106-107].

C. CONGRESSIONAL CONSIDERATION 1984-1986

The period 1984-1986 was marked by increasing Congressional doubt about the Navy's initial justification of the program. In addition to the production line issue, new concerns were raised about the suitability of the aircraft, the negotiation strategies with contractors, and the adequacy of analysis of alternatives. The Navy initially challenged critics to debate. But in response to consistent disapproval over perceived insensitivity to keep costs in line, the Navy adopted legislative counter-strategies. These tactics partly allayed fears of mismanagement, and partly deflected attention towards program strengths. But even those tactics had limited effect in the face of the new budget climate created by

Gramm-Rudman-Hollings Deficit Reduction Acts of 1985 and 1987.

1. Aircraft Suitability--The Wing Controversy

The new program was hardly underway when a problem developed in the A-6E that, by implication, could influence support for the follow-on aircraft. In late 1984, the Navy discovered wing cracks on fleet airplanes. This led to a second revision of the estimated life of the wing. The first revision was in the late 1970's when the wing life was extended from 2400 to over 4000 hours of flight. By late 1984, after wing fatigue was pinpointed as a cause of several accidents, the Navy revised its estimate of wing life down to 2250 hours. [Ref. 21:Part 4:pp. 798-799]

The shorter wing life meant that aircraft would have to be inducted for depot level rework sooner than planned. The result was increased maintenance costs and fewer operational aircraft. The Navy had two plans to get healthy. Grumman would be asked to strengthen new production wings to bring their life to 4400 hours. Meanwhile a new wing design, made from a composite material, would not only extend its lifetime to 8800 hours, but would also be able to withstand the weapons' loads planned for the A-6F. Competition between alternative contractors and the use of a firm fixed price contract were the strategies to be employed to acquire the new wing. These strategies were decided by Secretary Lehman in his capacity as the Service

Acquisition Executive. But, the "two wing" solution would cost additional money beyond the enacted budget. The Navy went to Congress for supplemental funding for FY 85.

The problem for Congress was understanding how a strengthened wing fit in with the request for a redesigned wing. The composite wing was recognized as superior, but it would not be delivered until FY 87. Meanwhile, aircraft were coming off of Grumman's production line with strengthened wings that, in Congress' view, might or might not reach the anticipated 4400 hour span. To some legislators, this sounded like another mismanaged operation. Rep. Stratton (D-NY) and Rep Holt (R-MD) tried to understand the nature of the Navy's plan:

Admiral BUSEY...Basically, what you are saying, Mr. Chairman, is correct. We will be putting a 2,250 hour wing on the A-6. Because of the extended use that we see for this, the only all weather aircraft in our inventory, we expect to have to rewing that airplane.

We are looking at local enhancement that will get us more service life....

Mr. STRATTON. I don't understand the answer, because I don't know which number of hours is involved in which wing. We have the current wing, which is the wing which has the problem provided a certain number of hours are flown and then you are going out to industry to try to get somebody to build a better wing that will last longer and won't crack, and you are not going to have that available for the aircraft that we are going to buy now. You are going to have to put on the old wing. That means that what we are doing is increasing the cost of these aircraft because we are going to have to produce them, put one wing on and then later on put another wing on. That is going to cost too much. I don't think we could justify this in this budget.

Mrs. HOLT. It seems to me the alternative to doing what you are doing...is we will not purchase the six planes this year, Grumman's production line will shutdown, we

will not get the planes that we need...Is Grumman located in New York?

Mr. STRATTON. I don't think there is anything funny in this. I think we are trying to deal with a serious matter. What happens if we don't buy the six that you want us to buy? Can't we put in F-14's, can't we put in EA-6's?

Admiral MARTIN. That line would have to shutdown, with attendant costs.

Mr. STRATTON. They can speed it up certainly later on, can't they?

Admiral MARTIN. Also, we need those aircraft in terms of being able to perform our mission as required. [Ref. 21:Part 2:pp. 579-580]

The Navy did get funds to pursue both a quick fix with Grumman and a long term solution with the composite wing. On 29 July 1985, the Navy awarded a firm fixed price contract to Boeing Military Aircraft as a winner of a competitive purchase for the new wing. But Rep. Stratton sponsored two amendments to the FY 86 Defense Authorization Act requiring a warranty for wings from both Grumman and Boeing for 4400 and 8800 hours respectively [Ref. 20:p. 603].

2. Congressional Concerns About Negotiations with Contractors

Congressional distress on this issue surfaced twice during the period 1984-1987. During early negotiations with Grumman, Secretary Lehman had considered shutting down the A-6 production line. The FYDP in 1983 indicated no purchases of A-6's after FY 84. But some in Congress interpreted the move as an attempt to win a bargaining advantage with the contractor, instead of reflecting Navy ambivalence about how best to transition from production of

the A-6E to the A-6F. [Ref. 71:p. 15] The issue was resolved when the service requested funds for continued procurement of the A-6E through FY 87.

The second appearance of the contractor negotiation issue occurred over the enhancement of competition in engine procurement. The F-404 engine for the A-6F was common with the F/A-18 Hornet, then procured on a sole source basis from General Electric Corporation. Production facilities were located in West Lynn, Massachusetts. When the Navy wanted to expand competition by employing Pratt & Whitney Corporation as a second source, there were cries of foul from Massachusetts legislators who saw General Electric losing out on a lucrative contract [Ref. 21:Part 1:pp. 950-952].

3. The Navy Challenges Critics to Debate

But the deliberations for FY's 85-87 saw a recurring chorus of doubt from Congress about the A-6E/F program. There was lingering concern about the justification for building the aircraft. Did the operational requirement support purchasing more aircraft that might not survive combat? The Navy met this criticism head-on.

During hearings for the FY 85 appropriation bill, the SAC wanted to know why it was necessary to increase the numbers of A-6's in the complement of planes aboard the carriers. The requirements for the A-6 appeared to increase by over 40%. The Navy responded that the decision to

include 2 squadrons of 10 planes each in the air wing was the result of the Blue Ribbon Oversight Committee's study to determine the best composition for future airwings to meet the threat of the 1990's. In the Navy's view, the requirement was documented and recognized by OSD. The size of the air wing was dictated by the most likely threat, an analysis resting on the wisdom and experience of its senior planning staff. [Ref 68:p. 214]

During the FY 85 SASC hearings, the issue of survivability was raised. Would the A-6 survive in combat? The Navy answered the question bluntly. No, the A-6E aircraft is not survivable. But the upgrade program increases its survivability. Furthermore, as to the charge that it's an old aircraft, Assistant Secretary of the Navy for Research, Engineering and Systems Melvyn Paisley said:

...as far as I know the Navy in general does not buy old airplanes. I flew in an A-6 not too long ago. It was brand new. It even smelled like a brand new car. [Ref. 72:Part 4:p. 469]

4. Congress Searches for Its Own Alternatives

Rather than accept the Navy's word that the upgraded A-6 was the best answer to a force modernization problem, Congress sought its own set of alternatives. Rep. Stratton had already cast about for some other aircraft to solve the wing issue, as cited above. In 1985, Senator Thurmond of the SASC wanted to know why the F/A-18 could not perform the missions assigned to the A-6E. Admiral Martin responded

simply that the F/A-18 was designed to replace the A-7, not to substitute for the A-6. The Hornet lacked an all-weather, deep interdiction capability [Ref. 73:Part 4:p. 1823].

The same year, in hearings before the HASC, Mr. Anthony Battista, a professional staff member, wanted to know if an F-14 variant would be a better choice for the strike mission. After all, the Air Force had chosen its fighter, the F-15, to fill an air-to-ground role. Admiral Schoultz responded that the idea had been studied, but rejected for several reasons. The F-14 lacks the range of the A-6. In addition:

Admiral SCHOULTZ...and of course, (the F-14 variant) is going to be more expensive than the A-6. That is probably one of the biggest drivers. Also, you develop another community within the Navy when we don't know how we will backfit our entire A-6 force of some 310 aircraft. Hopefully from the upgrade of the A-6 that we are planning we will be able to find out what we can take out of that upgrade and very cheaply, or much more economically, upgrade parts of about a hundred of our late model A-6's or late-year production A-6's, to bring that force up to standards. [Ref. 72:Part 4:p. 902]

Senator Kennedy, during the hearings on the FY 85 authorization bill, wanted to know why the Marines could not help make up the shortfall in A-6 aircraft by transferring their A-6's to the Navy. The Marines would replace them with F/A-18's. In a move to split the Marine's from the Navy's position, he asked:

Senator KENNEDY. What is the position of the Marines on the proposed modernization of the A-6E?

General FITCH. We support the improvement of the A-6E.

Senator KENNEDY. Just your own personal opinion, not the official Marine Corps position, would you consider a two-seat F/A-18 modified to perform the all-weather attack mission to be an acceptable replacement for the A-6?

General FITCH. In my personal opinion, if the aircraft were in the proper configuration, it could be. [Ref. 74:Part 3:p. 1533]

The result of this line of questioning was a decision to fund the beginning development of a limited night attack capability for the F/A-18.

5. The Affordability Issue Raised Again

But the most contentious issue was affordability. For Congress, it revolved around two points. Firstly, the upgraded A-6 competed with other aircraft programs for limited dollars. There had to be some evidence that the Navy was prioritizing its requirements for all of its airplanes if it wanted sympathetic treatment. Secondly, the number of open aircraft production lines, and the small numbers of aircraft coming off those lines, drove up unit costs. Congress could not let the Navy "raid the Treasury" through its own poor planning and mismanagement. These concerns were most clearly enunciated in the SASC.

Senator Goldwater's remarks, in 1984, to Admiral Watkins and General Kelley were quite blunt concerning the first point:

Senator GOLDWATER...but what I am trying to bring out is if the Navy wants to go ahead with plans to modernize the avionics of their three major aircraft, the F-14, the A-6, and the F-18, it is going to take quite a bit of

money...if you come to a decision that would allow us to go ahead with modernizing the avionics of the A-6's, I don't think there will be trouble for the Navy. Otherwise, having to buy an old airplane for two outfits with added cost for improvement might not sell. [Ref. 74:Part 2:p. 886]

As far back as 1983, the Navy conceded that it was operating too many production lines. From the high of 16 lines in FY 84, it promised to reduce the lines to 14 in FY 86, 12 in FY 87, and 11 in FY 89. Yet by the FY 86 budget hearings, it had failed to carry out this pledge. There were still 16 production lines open, although closings were planned so that the numbers decreased to eight lines by 1995. Admiral Martin explained in his prepared statement:

The Navy is fully aware of, and shares, Congressional concern over the number of production lines open to provide aircraft for naval aviation [Ref. 75:Part 4:p. 136].

Secretary Lehman, in 1984, blamed Congress for the problem:

Senator THURMOND. Mr. Secretary, the Navy buys planes in small quantities from numerous production lines which increases costs. You have testified before that you will terminate some of these lines. When will this begin?

Secretary LEHMAN. Aircraft procurement plans are a compromise between force requirements and affordability. Production rates are increased whenever possible and production lines subsequently closed. Sixteen procurement lines are necessary to satisfy force level expansion, eliminate short term deficiencies and achieve modernization...If Congress didn't continue to cut our budget requests we could save the taxpayers much money in unit cost savings through more efficient production rates. [Ref. 74:Part 2:p. 918]

Veiled threats about Congressional action were also injected into the discussion:

Senator BINGAMAN...I am concerned, I guess, after being here 2 years, that it is easier to plan to eliminate production lines than it is to get them eliminated.

What would your reaction be to some direction from this committee or from the Congress that you do in fact reduce the number of production lines...?

Admiral MARTIN...I would be opposed to direction... without considering the requirements involved. I would think that the production lines that have remained open have done so for very real and good reasons and so to answer your question specifically, I would not like to see closures mandated. [Ref. 73:Part 4:pp. 1864-1865]

That reducing production rates below an economic production quantity results in higher unit costs is a generally understood concept. But trying to measure the exact increase of such a move requires a base from which to calculate the change in costs. The Navy's contention is that recurring flyaway cost is the best measure. In the Navy's parlance, this is the cost of one aircraft on the runway, gassed up, ready to take-off. Non-recurring costs, as well as costs of spares, training, maintenance facilities, and personnel, are all germane, but should not be included in the analysis to determine unit cost for comparison of economic production quantities. Congress has not had any difficulty with accepting this analysis. But the myriad of different ways to add up the costs of an aircraft, all usually included on a view-graph when the plane is being briefed during hearings, can lead to some confusion:

Senator RUDMAN...Your flyaway cost is what on that (F/A-18)?

Admiral SCHOULTZ. \$21 million, it is on the right-hand side of the chart.

Senator RUDMAN. There are other costs that are not reflected in that \$21 million.

Admiral SCHOULTZ. Yes, sir.

Senator RUDMAN. If you were to reflect those costs and put it against the present projected unit buy, do you have that number?

Admiral SCHOULTZ. It looks like \$33.3 million.

Senator RUDMAN. Is it \$33.3 million if you take all of those non-recurring costs and spread them on this base?

Admiral SCHOULTZ. Yes, sir, that is the program unit cost. The airframe, the engine, and the avionics, the airplane sitting at the end of the runway, that is the recurring flyaway cost, and that is what we are counting as the airplane. If you add the nonrecurring costs, and the ancillary equipment, then it gives you a total flyaway. If you add support and advance procurement, you get weapon system costs. Add initial spares, and you get procurement costs. If you add the research and development, and military construction, then you get program costs. If you divide the program by the total number of airplanes that you are going to buy, you get a program unit cost....

Senator RUDMAN. So it would have to be said that, on the basis on which you are buying A-6E's it is a very expensive program we are running compared to buying a brand new aircraft, the F/A-18.

Admiral SCHOULTZ. Primarily because you are buying a smaller number.

Senator RUDMAN. Exactly...Mr. Chairman, I think this chart probably illustrates as much as anything the enormous costs that we are having because of very small numbers, which we are going to be forced into doing more of. The net impact on the aircraft acquisition budget is going to be a lot fewer airplanes and a lot more money. That is a very interesting chart. [Ref. 68:Part 2:p. 189]

Another example is Admiral Martin's detailed explanation to Senator Kennedy about economic production rates for several airplane types, which took up 3 pages of testimony during the FY 86 authorization hearings [Ref. 73:Part 4:pp. 1870-1872].

6. The Navy Designs a Counter-Strategy

The Navy's response to this threat to the A-6E/F program had to be tough and convincing. If cost savings

could not be demonstrated by closing down uneconomical production lines, then some other means had to be found to show that the program was not too expensive to afford. The means chosen were already at hand. The service would espouse the goals of maintainability, reliability, and commonality, and show positive achievements of ever-increasing measures of those goals. Admiral Busey told the HAC in FY 85 deliberations, that the upgrade would incorporate major "off-the-shelf" enhancements, such as digital avionics and a new engine, that would reduce direct maintenance manhours per flight hour by 25% [Ref. 76:Part 6:p. 336]. Over the lifetime of the aircraft, life-cycle cost avoidance was computed at over \$1 billion. Commonality within the avionics would be over 90% between the A-6F, the F-14D, and the AV-8B. This would be achieved, not by sole-source contracts, but through competition. Over 40% of the A-6F would be competitively procured, driving down anticipated costs [Ref. 76:Part 5:p. 191]:

Mrs. BYRON. Are we mandated to have a competition?

Admiral BUSEY. We believe we will get some significant pressures through competition to drive the cost down to be favorable to the taxpayer.

Mrs. BYRON. We will keep your feet to the fire. [Ref. 72:Part 4:p. 664]

The most important characteristic of the acquisition, however, was to be the firm fixed-price contract for development of the A-6F. An undefinitized contract was signed with Grumman in August 1984. In May of

1985, that contract was capped at \$350 million. After competition, General Electric was chosen to provide the F404 engine, the same as in the F/A-18. Along with the engine and Navy in-house testing, total development costs were held to \$500 million, considerably less than the \$750 million-\$1.2 billion range initially suggested by the Blue Ribbon Oversight Committee.

With these main selling points, Congressional criticism was overcome. Both the A-6E procurement and the A-6F development program were funded as requested from FY 84 through FY 87.

7. The Budget Climate Changes

But the sales pitch in one year can become a liability later. Beginning in the budget deliberations for FY 87, two concerns surfaced about the nature of all firm fixed-price contracts. As explained in Chapter III under acquisition program design, these type of agreements are a means of achieving program stability. The product to be delivered is well described and the contractor knows the level of effort necessary to complete the contract. Just as the Navy assumes the contractor will fulfill his obligation to deliver, so the contractor assumes that there will be no modifications or cancellations. Termination or modification costs can be prohibitive for fixed-price type contracts.

Firstly, GAO found that fixed-price type contracts appear to be inappropriate if significant risk exists for

schedule delay and underperformance due to the unreliability of the government's cost estimates and the undetermined quantity of weapons to be delivered. Examples found that illustrated the problems were the Navy's FY 89 Submarine Combat System (FY89CS), the Army's Line-Of-Sight Forward Heavy Weapon (LOS-F-H) and the joint Navy-Air Force Advanced Medium Range Air-to-Air Missile (AMRAAM). Although cost growth was successfully contained, GAO believed that the services could be induced to continue programs not performing satisfactorily in tests. [Ref. 43:pp. 26, 63-64, 80-83]

Secondly, the two Gramm-Rudman-Hollings Acts of 1985 and 1987 required all federal agencies to search for means to reduce outlays. In a bid to reduce the budget deficit to zero, the President was required to submit a plan to Congress to bring outlays and revenues closer together by reducing budget authority. If the President and Congress could not agree on such a plan, the Comptroller General was empowered to make the decision. The comprehensive and resolute nature of Gramm-Rudman meant that it was felt in every Navy appropriation and program. In the procurement accounts, the fear was that some fixed-priced contracts would have to be renegotiated or outright terminated to hold outlays within the goals. If contracts were cancelled, termination costs would be incurred. If agreements were renegotiated, bargaining would be in a "sole-source"

environment and not conducive to keeping costs down. Finally, if FFP contracts were later to be reopened (perhaps as a result of Congress again reversing its strategy for deficit reduction), price increases were inevitable. In this kind of "no-win" situation, the risk was considered so great to the Navy's budget plans that it informally requested legislation to exempt FFP contracts from Gramm-Rudman reductions [Ref. 77:Part 5:p. 490].

Gramm-Rudman threw not just the A-6F, but the entire aircraft acquisition plan into doubt:

Senator SASSER...By the final year of Gramm-Rudman, in 1991 I see the Navy plans to increase the number of aircraft procured by 55 percent.

Now, how does the Navy realistically expect to achieve that goal in view of the budget trends of fewer dollars for defense?

Admiral MARTIN. We are looking at trying to maintain, within the fiscal constraints that we have, a balanced and affordable program. Our budget that we are laying out for the 5-year defense plan is one that we think is achievable and is executable within the fiscal constraints that we have. But it is going to take a lot of moving and very careful management of our resources. [Ref. 77:Part 2:p. 206]

The Gramm-Rudman-Hollings Deficit Reduction Act of 1985 would later be overturned by the Supreme Court on the issue of the separation of powers under the Constitution, the Comptroller General's independence from the legislature. But the policy implementation implications did not disappear. Congress deliberated the Gramm-Rudman-Hollings Deficit Reduction Act of 1987 in tandem with the FY 88/89 budget.

D. FY 88 BUDGET DELIBERATIONS

There were two factors which affected the way Congress would consider the new budget for FY 88. Section 1405 of the FY 86 Defense Authorization Act mandated that the President submit a two-year budget to Congress for defense. From the viewpoint of many in the legislature, this was a victory for those tired of continuous budgeting. From the vantage of the DOD, it promised a measure of program stability. Furthermore, a new Congress took its seats after the 1986 midterm elections. The Senate, in the hands of a Republican majority since President Reagan's election in 1981, now shifted to Democratic dominance. Committee chairmanships changed as Senators Sam Nunn (D-GA) and John Stennis (D-MS) became leaders of the Armed Services Committee and the Defense Subcommittee of the Appropriations Committee, respectively. In the House, the Democrats were returned with even larger majorities.

1. Proceedings Within the Armed Services And Appropriation Committees

On 20 January 1987, Sen. Nunn called the SASC to order to hear testimony on the role of resource constraints in the formulation of U.S. military strategy. This was a significant departure from prior years that started out with posture statements from the Secretary of Defense and the Chairman of the JCS. The principal witness was Dr. Lawrence Korb, former Assistant Secretary of Defense for Manpower,

Installations and Logistics. His prescription for coping with restraints was a five point program:

- Both Congress and the President must recognize the existence of a constrained fiscal environment.
- While real defense growth was out of the question, real decline should also be avoided.
- Force structure goals would have to be altered.
- Development of new weapons systems would have to be delayed; and 5) marginal programs had to be eliminated. [Ref. 78:p. 363]

At the same time, a report in Aviation Week and Space Technology cited OSD telling Secretary Lehman to declassify parts of the ATA program, so that Congress could look at cost estimates and general performance figures without the national security encumbrances. The ATA, because of its application of new technology, was still in development, and many years away from production. The rationale for OSD's action was to bring the Navy in line with the Air Force. Since the latter's Advanced Technology Fighter (ATF) was recently declassified, the Navy should also declassify its advance plane, to advance a spirit of cooperation between the branches of government. The article speculated that the reason for Lehman's reluctance was that a "black" program served to defend more visible acquisition efforts. If the ATA was a successful initiative, its visibility would make it more difficult to defend less successful programs from Congressional budget cutters. [Ref. 79:p. 17]

Fiscal Year 88 marked the first year of a Navy request for procurement monies for the A-6F. Twelve airplanes were requested in the budget, also the first time the minimum economic rate of production was requested of the A-6 in more than 6 years. The first prototype had not yet flown, but Congressional concerns at this time seemed to revolve around a minor slip in the date for its initial flight. Grumman requested a 3 month delay in order to solve problems in programming the new avionics computer. Before the HASC in February 1987, Secretary Lehman termed the problems as minor, and said that the slip was being challenged by the Navy as unnecessary. In any case, he said that the firm fixed-price contract prevented any escalation in price. The Government's exposure to risk was minimal. [Ref. 80:Part 2:pp. 312, 334]

Later that month, Lehman announced his resignation. His replacement was James Webb, the former Assistant Secretary of Defense for Reserve Affairs.

By late March, though, the first signs appeared that the procurement plan for the A-6F was unravelling. The Navy announced a new program under consideration to remanufacture A-6E's to A-6F's. Speculation was that this preceded a cutback in A-6F procurement. Given the current budget atmosphere, this appeared to be a strategy to maintain planned force levels at reduced cost. [Ref. 81:pp. 18-20]

Pressure then reappeared from CBO and OSD. CBO released a new report concerning economic production rates of weapons systems DoD-wide (see Appendix H). The study claimed that the A-6E had a minimum economic production quantity of 12 airplanes per year. Previously, the Navy's five-year average procurement was only eight per year. Evidence of OSD's flagging support for the follow-on A-6F was provided by Dr. Robert Costello, Assistant Secretary of Defense for Acquisition and Logistics. In testimony before the SASC, he was quoted calling the study "an excellent job of financial analysis" and that it "should be looked at as a vigorous scrubbing of DoD weapons buying management." Sen. Carl Levin (D-MI) explored the limits of collaboration by asking for a priority list of procurements. However, in keeping with Secretary Weinberger's longstanding refusal to provide such a list, Dr. Costello declined the invitation. [Ref. 82:p. 77].

In spite of this line of questioning, in April the HASC approved funding of the A-6F procurement at 12 and 18 aircraft for the two years respectively [Ref. 83:p. 47]. But consistent with the spirit of former Secretary Korb's testimony that some new weapon systems would have to be delayed to save money, the HASC chose to eliminate funds from the ATA program. Later, the HAC accepted this outcome from its counterpart committee and appropriated monies in conformity with the HASC report. Moreover, the HAC

applauded the Navy's efforts to procure both new A-6F's and remanufactured A-6E's because of "...very attractive pricing options." [Ref. 84:p. 143]

The SASC report of 8 May 1987 came as a surprise. It took exactly the opposite tack from the HASC, eliminating procurement of the A-6F and authorizing continued support for the ATA:

The committee is concerned that even after the F model is developed that the A-6 would still be a very vulnerable aircraft because of its subsonic speed and very large radar image, which makes it vulnerable to antiaircraft missiles and gun fire. The new engines and new electronics would not appreciably reduce that vulnerability. The Navy's own analysis shows the A-6 vulnerability to be unacceptably high.

The committee is also concerned that new construction A-6F's are receiving disproportionate emphasis in Navy planning. The Navy is proposing to buy 150 A-6F's, which together with the development costs will each \$6.5 billion. Because of the budget constraints, the Navy has no plans to upgrade the more than 340 early model A-6s. By 1995, only one-third of the A-6 fleet will be "modern" while two-thirds will be obsolete....

The committee believes that it is not possible to proceed with both programs (the A-6F and the ATA) with today's budget realities. If the Navy's Aviation Procurement Account receives no real growth during the next five years, some \$4.3 billion or 12% will have to be removed from the current five year plan. The committee believes such an outcome would be devastating, but not entirely unrealistic in light of the current budget environment.

The committee directs the Navy to terminate further development and procurement of the A-6F aircraft and to develop a program to upgrade the A-6E's in the fleet. While the ATA is an expensive program, the committee believes the vulnerability of the A-6 justifies expeditious development of the ATA. [Ref. 85:p. 36]

The SAC concurred in this judgement and appropriations were in keeping with the SASC report.

The SASC report clearly placed opposition to the A-6F within the Senate, their objections based on factors related to vulnerability and affordability. In spite of repeated Navy efforts in prior budget deliberations to demonstrate that the A-6F was a carefully managed program, which successfully met its baseline measures of effectiveness for survivability and affordability, the SASC had swept the arguments aside to conclude that the ATA was a better investment. Recall that the ATA was still a classified initiative and had not progressed beyond the Demonstration and Validation stage of its acquisition. Thus the SASC was banking on the future success of the ATA, but with attendant technological risk.

An alternative judgement of the SASC's position reflects the opposition of the chairman, Sen. Sam Nunn (D-GA). Sen. Nunn echoed the longstanding SASC opposition to continued operation of low economic quantity production lines. Navy efforts to convince him, and the SASC, went to great lengths to find a persuasive measure of program management effectiveness, including comparison of the lower production costs per pound of the A-6 to the F/A-18, and adding the production numbers of the EA-6B to those of the A-6 to show increased production line efficiency. When coupled with the affordability issue raised by the ATA's continuing development, survivability appears to be less

important a factor in the SASC decision to terminate the A-6F program.

2. Proceedings of the Joint Conference Committee on the
FY 88/89 Defense Authorization Act

The House and Senate Armed Services Committees reported out their respective bills on 15 April and 8 May 1987 respectively. But floor debate and reconciliation of the differing versions had to wait as contentiousness within the Senate, regarding proposed strategic arms control language, prevented any final agreement on military authorizations. Fiscal Year 88 began on 1 October without a Defense appropriation or authorization legislation.

When the House-Senate authorization joint conference finally met in mid-October, the situation for the A-6F had changed dramatically. Several events were factors in any decision. With Secretary Lehman's resignation, much of the support for the aircraft had evaporated from within the Navy. The threat to cancel ATA funding, represented by the House version of the authorization bill, appeared to be a more substantial menace to the Navy's aircraft procurement plan. Said one senior DOD official:

There is only so much money in the planned budget, and the A-6F has the lowest priority among Navy tactical aircraft programs. It is a program that would be nice to have, but it cannot be afforded. The Navy and Congress cannot continue to take money from each aircraft program. A hard decision to kill some programs has to be made. [Ref. 86:p. 20]

Another development was the emerging interrelationship of the F-14D, the ATA, and the Air Force's ATF. The development schedules for the two latter high technology airplanes were slipping. The Navy had advanced the schedule of the F-14D to counter this. Some of the additional money necessary to accomplish the strategy appeared to come from the ATA program. In order to keep the ATA on track, the A-6F program was considered for reduction.

Then, on 19 October 1987, national economic considerations became a factor. The stock market fell over 567 points in one day, the largest loss ever in the Dow Jones Industrial Average. Analysts were quick to point to the budget deficit as a contributing cause. The next day, President Reagan announced a "budget summit" with the Congressional leadership. All spending and revenue categories were on the table, except Social Security.

In this confusing atmosphere, the joint conference committee had difficulties sorting out the possible and the impossible. By early November, they seemed to have crafted a two tier approach to budgeting for FY 88/89 to meet all of the uncertainties. The high tier provided for spending at \$296 billion, a reduction from the President's request of more than \$25 billion. The low tier was set at \$289 billion. Neither level saw an increase in spending to cover inflation during FY 87.

But the issue of cancelling individual programs was left up to the senior leadership on the Armed Services Committees of both chambers. Recall that the House and Senate had taken opposite positions regarding the A-6F and the ATA. Now word leaked that there was agreement that two attack aircraft programs in the production phase of acquisition were close to termination: the A-6F and the Marine's AV-8B. The former appeared headed for outright cancellation, while the latter was funded only in the high tier. The understanding regarding the A-6F was quickly reached. Recalled a professional staff member, "within 5 minutes the logic of the Senate position was so evident that the House conferees showed no reluctance to retreat from their prior endorsement of the A-6F" [Ref. 87].

The Marine Corps, though, mounted an intensive lobbying effort to salvage their airplane. At a Capitol Hill party celebrating the Corp's birthday, the Marine Commandant vowed to take whatever action necessary to reverse the decision [Ref. 88:p. 32]. Rep. David Martin (R-NY) a former Marine pilot, then garnered enough support among HASC Republicans to threaten opposition to the legislation. On 5 November, HASC Chairman Les Aspin told his Republican counterpart, Rep. Bill Dickinson, to round up the necessary votes for conference agreement. Aspin threatened to reopen issues already settled with the SASC and redraw the legislation more in line with Democratic

party views if Republican support was not forthcoming. The showdown never took place. On 9 November, the AV-8B issue became a moot point when it was reported that the budget summit would most likely settle on a figure for defense spending above the lower tier determined by the joint conference committee. [Ref. 89:pp. 2796-2797]

The joint conference reported out a defense authorization bill for FY 88 on 19 November. In language nearly identical with the SASC report of 8 May, the conference set forth the "...future of Navy aviation." [Ref. 90:p. 306] (See Appendix D) The A-6F would not be funded. The Navy was given two alternatives: search for a cheaper aircraft than the A-6F or purchase 11 A-6E's. The Marines could buy AV-8B's, but should give their A-6's to the Navy to relieve any A-6 shortfall. They could also pursue development of their two-seat version of the F/A-18 Hornet. Public speculation had already decided that the Marines were more interested in an F/A-18D(Plus) because it simplified logistics support for an all F/A-18 strike force [Ref. 86:p. 20]. Regarding the A-6F cancellation, Chairman Aspin was quoted, saying "with tight budget over the next few years, we can expect to face such decisions again." Chairman Nunn explained his own rationale, that the March 1987 CBO report on various weapons systems procurement rates indicated that the A-6 was below the minimum economic rate. [Ref. 91:pp. 22-23]

3. The Authorization-Appropriation Mismatch

The budget summit agreement was announced on 20 November 1987. It provided for \$292 billion in defense spending, an amount that could be accommodated within the authorization legislation although the Armed Services committees had two other versions of authorizations ready to unveil if necessary. But the same certainty regarding constraints on authorizations did not carry over into appropriations. An appropriation bill for FY 88 had yet to be enacted. The 13 bills had been wrapped into an Omnibus Appropriation Act in order to save time and to coordinate the implementation of the budget agreement. The legislation was in Joint Conference. Although the leadership of Congress had concluded the budget agreement, there was speculation that the rank and file would not abide by the arrangement [Ref. 92:p. 2860].

For defense, the conferees were faced with some unpleasantness. Although the high tier of the FY 88 Defense Authorization Act was established at \$296 billion, the grand total of programs authorized summed to \$299.1 billion. As explained in Chapter II under characterizations of the budget process, in the past such a situation was an invitation for appropriations to "guard the Treasury" by slashing spending. But the budget agreement had fulfilled that role. Now the issue at hand was, in light of dwindling resources, who would set the agenda for defense spending?

Appropriators intended to exercise whatever power they had to reshape defense expenditure. Organizational conflict within Congress would be intensified.

Recall that the HAC and SAC had concurred earlier in the decisions of their respective Armed Services Committees regarding continuance of the A-6F program: funded in the House, terminated in the Senate. In the circumstances resulting from the deliberations of the authorization joint conference in November, Rep. Bill Chappell (D-FL) saw the opportunity to guarantee survival for the A-6F. In a clear challenge to the Armed Services Committees, he was instrumental in keeping funding intact for the attack aircraft [Ref. 93:p. 3127]. In the haste to make Christmas recess, the omnibus legislation was approved by both chambers and signed by President Reagan on 22 December 1987.

Critics of Rep. Chappell's support of the A-6F have pointed to intensive lobbying by Grumman Corporation as the motivation for his actions. The Congressman's office counters that he disagrees with the SASC's rationale for recommending termination of the airplane's production, citing the increasing average age of A-6E's in operation [Ref. 94]

4. Program Termination

The Armed Services committees reacted swiftly. In a joint letter to Defense Secretary Frank Carlucci, Sen. Nunn and Rep. Aspin stated their "unequivocal opposition" to any

funding of the A-6F, regardless of the impossibility of resolving the issue before the start of the next budget cycle. [Ref. 1:p. 28]

The Navy was clearly ambivalent about the A-6F. On one side were some in the aviation community who saw the aircraft as a vital link to the ATA. On the other were those who felt the ATA was clearly the higher priority, that combat readiness would not suffer substantially if the A-6F were terminated. Given the scarcity of financial resources now foreseen, the major threat would be risking funding problems for both aircraft. Secretary of the Navy Webb appeared to side with the latter group when he signed a memorandum to Secretary of Defense Carlucci on 10 December indicating the Navy would prefer to cancel the A-6F program in the FY 89 budget. [Ref. 1:p. 28].

Frank Carlucci was named on 5 November to replace Caspar Weinberger as Secretary of Defense. In his confirmation hearings before the SASC, he vowed to take two approaches to trim the defense budget to meet Congressional objectives. Firstly, he would reduce active duty personnel rather than skimp on maintenance and training. In his view, he was trading force size for effectiveness. Secondly, he favored buying fewer different kinds of weapons, so that those built could be produced at higher rates. He said he recognized the problems with declining unit costs and that the usual Pentagon answers to resource constraints would not

be effective. In particular, he singled out program stretch-outs as a favorite DOD strategy that required correction. [Ref. 95:p. 2798]

In a news release of 18 February 1988, OSD presented an amended FY 88/89 DOD budget. It lamented that the FY 88 budget process precluded the enactment of a budget that would have permitted DOD to achieve economical procurements, program stability, efficiencies in operations, and to preserve the rebuilding of military capabilities that began in 1981. Nevertheless, other factors dictated a reduction of resources and the requirement to replan their distribution. The priorities for reconfiguring the defense budget were people, readiness, and efficient acquisition. Force structure reductions, program terminations and deferrals, reduced research and development, and end-strength cuts provided the monies for the priorities. Program terminations were decided on the basis of affordability and the existence of viable alternatives. In this latter category was the A-6F. [Ref. 96:p. 4]

The OSD decision failed to completely resolve the authorization-appropriation mismatch. The FY 88/89 Authorization Act left the choice to the Navy to either purchase 11 A-6E's or start a more affordable A-6 development program. The Omnibus Appropriation Act for FY 88 specified funds available for only purchasing the A-6F. Thus obligation authority remains suspended until the

Navy decides on which course of action in accordance with the authorization act to follow, and requests reprogramming authority from Congress. Currently, the Navy is trying to build support for an A-6G development program. Rather than procure an entirely new aircraft, the basic airframe of existing A-6E's would be modified and upgraded to reflect the configuration of the A-6F. Congressional confirmation of this proposal has yet to be determined.

E. CHAPTER CONCLUSIONS

The conclusions on control of the A-6F program are as follows:

1. The Navy's Perspective

The Navy concludes that the A-6F was terminated by three factors: budgetary constraints, the lack of a unified position in the service, and the intervention of OSD to terminate the program [Ref. 97, Ref. 98]. The budgetary constraints relate not to those arising from the budget summit agreement of November 1987, because the appropriations conferees had found room for both the A-6F and the ATA in its version of the FY 88 budget after the presidential bargain was set. Rather, restrictions resulting from attempts to reduce the budget deficit in the climate engendered by Gramm-Rudman are a key aspect of the project's demise. The lack of a unified position within the service was evidenced in the aviation community's

ambivalence regarding the priority of the ATA. Finally, the opposition of the SASC and the termination decision of OSD was resented by the Navy program office because it expected to receive continued political support from these organizations.

The lack of program stability for the A-6F is a source of much indignation in the Navy. OSD is viewed as bowing to the political will of Congress instead of resisting micromanagement of force structure decisions and a violation of the Navy's independence to pursue its own course of action. The autonomy of the Navy, in the Navy's view, has been infringed upon by Armed Services Committees of Congress in their choosing to dictate the future force structure of naval aviation, and by OSD prevention of the Navy's appeal for the A-6F in the FY 89 budget.

2. An Alternative Perspective

Close study of the A-6F case also yields some alternative conclusions concerning the termination of the program.

Firstly, the departure of John Lehman as Secretary of the Navy may have contributed significantly to the project's decline in political feasibility as Lehman had been a keen and effective supporter of the project.

Secondly, the Navy was unable to settle the production line issue with Congress. From program inception in 1983 through authorization deliberations in November

1987, the Navy never laid to rest the issue that it operated too many production lines, turning out aircraft at lower than economic rates. Although counter-strategies to defend the program were developed by the Navy, the SASC viewed them as sound management practices that only prevented cost growth due to technological risk. The counter-strategies did not prevent cost growth due to inefficient production rates.

The Navy did not communicate effectively the operational requirements for the A-6F so as to make it seem affordable. The aircraft was promoted as a transition to the ATA. In that light, it had to be sold as a relatively cheap way to bridge the operational gap. But the Navy planned to fly the A-6 for many years in the future, as demonstrated by its larger role in the new carrier air wing. The program was not perceived by Congress as a financial bargain, with life cycle costs estimated by the SASC in the FY 88/89 authorization bill report to be \$6.5 billion. Thus there was a mismatch in the promotion of the operational requirement of the A-6F to Congress and the budgetary implications of approving the aircraft's procurement.

There also was a carry-over of weaknesses of the A-6E to the A-6F. It was the A-6E which had been procured at low economic production rates, and it was the A-6E that required fitting of a new wing. It was also the A-6E's combat vulnerabilities that generated the new operational

requirements for a more survivable aircraft. The SASC concluded that the survivability improvements made in the A-6F were not sufficient to overcome the inherent weaknesses of the basic A-6 aircraft design. It is possible that the image of the A-6E before Congress was melded into that of the A-6F. Senator Nunn confused the two aircraft, as shown in his reaction to the CBO report of March 1987 regarding economic production rates. The stigma of the predecessor aircraft apparently was difficult to shake.

Finally, the Navy assumed that OSD participation for A-6 program review and approval would be favorable for program stability and survival. But OSD support waned throughout 1987, as evidenced by the direction it gave to Secretary Lehman to declassify the ATA, and by Dr. Costello's positive remarks concerning the CBO study of March 1987. Secretary Carlucci's decision to kill the program confirmed a trend already underway. The lingering bitterness in the Navy over program termination may indicate that OSD support was taken for granted despite signs that OSD approval was absent for the A-6 project.

V. ANALYSIS AND CONCLUSIONS

The preceding chapters have described the context of Congressional control and Navy response, suggested an adapted model for understanding Navy responses, and presented a case history of the A-6F Intruder II aircraft. This chapter applies the model and articulates the results of testing institutional interactions in the A-6F acquisition to assess conformity to behavior predicted by the model. Research questions posed in Chapter I are answered. Conclusions are presented, grouped in categories of Congressional control and its use, Navy responses to control, and specific findings in the A-6F acquisition. Finally, areas for further research are discussed.

A. APPLICATION OF IMPLEMENTATION PROCESS CRITERIA

1. Participant Autonomy

Autonomy enables institutions to engage in strategy development, to assemble program strategy components, and to negotiate the terms of participation in the implementation process. Program strategy components are the building blocks of the program implementation "machine," namely administrative mechanisms, facilities, design services, clearances, coordination processes with the other uniform services, and project review and approval, among others.

When the Navy approaches Congress, the service primarily seeks political support and funding from the legislative branch. Autonomy enables a sense of ownership and establishes offensive momentum to insure both program survival through the redundant Congressional budget review process, and to ward off efforts to micromanage the operation of the program. Alternatively, the freedom to give or withhold program implementation strategy components is a factor of political bargaining that helps determine the conditions for participation in the implementation process. The implementation model applied to acquisition programs assesses the Navy's assertion of ownership of programs and Congressional control over programmatic processes and outcomes.

The Navy demonstrated autonomy in the A-6F acquisition, manifested in the decision processes that arrived at the program's justification and design, the central position assumed by Secretary John Lehman as the principal marketing executive before Congress, and the aborted campaign to rescue the program from termination. Most acquisition programs are born within the uniform service's POM processes, not identified for them by Congress or the Presidential administration (the Strategic Defense Initiative being an exception). The Blue Ribbon Committee on Strike Aircraft was assembled at the Navy's instigation to review alternatives for strike warfare hardware designs

and capabilities. The service decided to emphasize improvements in maintainability and survivability as measures of program success. Furthermore, Secretary Lehman directed the employment of acquisition strategies such as firm fixed-price contracts, competition in the new wing fabrication, and the commonality of weapons systems with other frontline Navy aircraft. His highly visible role as chief spokesman for the A-6F to Congress reinforced the independence of the Navy to manage programs. Finally, the still-born proposal to use appropriated funds in the FY 88 budget as implied authorization for A-6F production indicates Navy reluctance to terminate the aircraft procurement. The Navy assumed an offensive position vis-a-vis Congress to design, administer, and sell the A-6F airplane.

Congress asserted its independence by demanding control over funding and outcomes of the program. This is evident in Rep. Stratton's amendments to the FY 86 Authorization Act to force the Navy to seek warranties from both Grumman and Boeing on the hourly lifetime of the A-6E wings. The Navy testified that testing affirmed the improvements in life span. Congress preferred the more stringent control of law, directing that a warranty be negotiated for a specific lifetime.

Sub-organizational autonomy also was present. Institutions are composed of sub-organizations that enjoy

some freedom to pursue different goals. An example is the rivalry expressed in committee conflict within Congress. The ambivalence of the Navy's aviation community regarding the priority of the A-6F in relation to the ATA also is indicative of sub-organizational autonomy.

2. Assembly of Program Components

As discussed in Chapter III, the advocacy process includes a search for the correct acquisition program design and justification, and attempts to influence Congressional deliberations. These elements are bound together into a promotional strategy to achieve program survival and stability.

The Navy justified the A-6F as a low technological risk follow-on aircraft to bridge the gap to the more challenging ATA. Because it was sold as a transitory weapon system, the A-6F program required emphasis on decreasing cost and quick introduction into the fleet. These were present in the choice of the firm fixed-price contracting vehicle, the shortened development time, and the projected life cycle cost analysis.

Congressional critics insisted that having a large number of open production lines producing at low rates was inconsistent with the Navy's commitment to manage programs efficiently. The Navy countered with three arguments. Firstly, as Admiral McDonald reasoned in 1983, closing down production lines did not relieve the Navy of the requirement

for replacement aircraft. Peacetime losses were inevitable; they must be replaced to maintain the size of the force. Force structure is dictated by the commitments made to our allies as well as the considered judgement of the top officials within the service. Therefore, closing production lines against the advice of military planners was unreconcilable with fulfilling the promise to defend the United States' national security interests. Secondly, as Secretary Lehman also argued in 1983, keeping uneconomical production lines open was the price paid for surge industrial capacity during wartime. Continuing uneconomical production lines is not ideal, but the Navy argued that investment in mobilization capability mitigated the additional peacetime cost. Finally, the Navy concluded that the A-6F acquisition incorporated features that offset other weaknesses. Cost savings came early in the program through competitive procurement of the engines and avionics and the initiation of a firm fixed-price development contract. Other savings were realized over the lifetime of the project through commonality of systems with other aircraft and the translation of improved reliability and maintainability factors into the hardware designs.

Thus, the Navy used several strategies in program design and justification to gain greater budget continuity from Congress. The service assembled program strategy

components in soliciting the legislature for political support.

3. Avoiding Programmatic Dysfunction

The indications of eroded programmatic goals are delay, underperformance, and cost growth. Political support and funding are designed to prevent dysfunction. If the symptoms of dysfunction develop, further strategies are employed to arrest the spread of damage. The A-6F case provides evidence of this circumstance.

After initial authorization and appropriation, the Navy sought program survival, stability and freedom from Congressional control. If the A-6F were terminated, there would be no aircraft in the early 1990's to bridge the gap to the ATA. Therefore, survival quickly assumed paramount importance, especially when Congress criticized excessive numbers of open naval aircraft production lines producing at low rates. The A-6E was still in procurement, but below the economic production level. By inference, the A-6F would be similarly branded by Congress as another indication of the Navy's reluctance to manage its aircraft programs cost-effectively. The legislature's threat to mandate closings of production lines jeopardized the A-6F, although the airplane was in Full Scale Engineering Development and production was planned at economically sound levels.

At this point in the acquisition, the Navy solicited support from other participants in the program

implementation process. It sought OSD concurrence in assessment of the nature of the threat to strike aircraft in the 1990's and beyond, i.e., justifying the program's inception relative to the combat capability of potential adversaries. The service also sought support from the Marine Corps because the A-6F would enter the Marine inventory. Primarily, the Navy chose to emphasize continuity with a prior policy choice by presenting the A-6F as a variant of the A-6 strike aircraft first introduced in 1963.

Continuing production of the A-6E during development of the A-6F illustrates a key point of the Navy's strategy to market the program to Congress. The A-6F was billed as evolutionary from the A-6E, rather than revolutionary. The Navy intentionally did not label the aircraft as the A-6F during budget deliberations for FY's 84 and 85. Instead, the service referred to the plane as the A-6E Upgrade in all documentation and testimony. Senators and Congressmen who slipped into addressing the plane as the A-6F were politely corrected [Ref. 68:Part 2:p. 197]. The unforeseen outcome was that Congressmen and Senators associated both the strengths and weaknesses of the A-6E program with the A-6F. Depicting the aircraft simultaneously as new on the attributes of maintainability and survivability, but old on the attribute of technological risk created confusion in the minds of Congressional decision makers. Which aircraft was

being procured below economic production level? In November 1987, Senator Nunn continued to believe that the CBO report of March 1987 proved the A-6F was unaffordable because its predecessor had a history of low rates of production.

The Navy sought stability through a fixed-price development contract with Grumman. An important element of FFP contracts is their inherent resistance to modification. The A-6F's configuration was substantially frozen because of the additional costs involved in renegotiation. Grumman was similarly motivated to keep costs low because of the harnessing of his profit incentive. Furthermore, the technological risk was firmly set on the shoulders of the contractor to develop the aircraft with the agreed measures of performance. Simultaneous oscillation of price and product performance was prevented.

The bonus attribute of an FFP contract is the measure of protection from Congressional backsliding on its production commitment. Congress was unlikely to renege on providing funding for the A-6F because of substantial termination costs. When Gramm-Rudman-Hollings threatened to upset that strategy, the Navy again initiated a counter-strategy. The service informally requested Congress to exclude fixed-priced contracts from Gramm-Rudman-Hollings controls.

4. Summary of Applying Model Criteria

The implementation model explains many of the actions of participants in the A-6F acquisition. The Navy assumed the prime position as owner and defender of the project, assembling strategy elements to achieve funding and political support. Congress participated in the process at the price of controlling some of the outcomes. The Navy's promotional strategies were carefully designed to avoid perception of programmatic dysfunction.

B. ANSWERS TO THE RESEARCH QUESTIONS OF CHAPTER I

In Chapter I, four research questions were posed. The following are the answers to these questions developed as a result of the research project.

1. What Is the Nature, Scope, and Intent of Congressional Budget Control?

Chapter II presented Congressional control mechanisms in detail and analyzed the most significant characterizations. Budget controls are determined by processes of authorization and appropriation, and augmented by oversight activities. The authorization and appropriation processes were found to be quite similar. Both include hearing testimony in committee and subcommittee from executive branch witnesses, budget bill mark-up, committee reports, floor debate and initial vote, joint conference votes, final floor votes and transmission to the President. Oversight includes hearings, investigations by

Congress, examination by "watchdog" agencies, and requirement for submission of reports from CBO, GAO and the executive branch. Problems with control include the authorization/appropriation mismatch, delay in passage of budget legislation, institutional conflict within Congress, limited focus of budget review, duplication of effort, micromanagement of executive budget implementation, and the dissipation of energy in the diffusion of Congressional power through its highly detailed annual review of the budget.

Congress exercises its control functions in the context of its Constitutional position in the government. However, there are other reasons for use of budget and related controls, such as the perceived waste in executive operations, recapturing policy initiative vis-a-vis the executive, increasing complexity of issues, and advancing the agendas of individual Members of Congress. Within the definition of the implementation model developed in this thesis, Congressional control is a fixed institutional characteristic that must be confronted in the Navy's strategy assembly process. Congress exacts a price for its cooperation and involvement in implementing programs; the surrender by the Navy to Congress of some control over programmatic outcomes is partial payment of this price. Avoidance of controls is an objective of executive branch

agencies, which employ strategies to thwart their imposition.

2. What Is the Nature, Scope, and Impact of the Navy's Responses to Budget Control?

Chapter III outlined a model for understanding implementation of policy and developed three criteria to judge the effectiveness of Navy strategies in the A-6F acquisition. Those criteria were tested and it was concluded that the model accurately predicts elements of strategy and politics in the attempted implementation of the A-6F project.

As the Navy assembles its policy implementation strategy, efforts to garner Congressional political support and funding on favorable terms are expressed both in program design, program justification, and direct involvement in the deliberative process. The nature of the process is political as the Navy bargains for advantage in budget deliberations, attempting to assure program survival, stability, and the avoidance of control. In program design, it uses several strategies to demonstrate to Congress that the service shares concern for affordability and prevention of waste. The Navy also exploits "pork barrel" politics to portion out the benefits of defense contracts to gain favorable votes in budget deliberations. In the area of program justification, it continuously educates Congress to the missions of the Navy, to the weapons systems used, and

to the measures of effectiveness chosen to judge program success (e.g., maintainability, reliability and survivability). Through budgetary and financial maneuvering, the Navy uses both reprogramming and supplemental appropriations to guarantee program funding and stability. It may attempt to persuade Congress by making good faith attempts to remain in control of expenditures when unforeseen circumstances derail the original budget execution plan. In attempting to influence Congressional deliberations directly, the Navy encourages a high level of agency contact while simultaneously regulating the kind of information exchanged.

What are the impacts of these responses? Are the implementation strategies successful? Are the pitfalls of delay, underperformance, and cost overruns avoided?

a. Delay

If the Navy loses the political skirmish on Capitol Hill and a program is subsequently terminated, at a minimum, a delay of the desired programmatic outcome is certain. While political observers remark upon the "no ninth inning" factor of policy formulation [Ref. 3:pp. 148-149], the substantial effort for program designers and planners to regroup and restructure proposals must be taken into account. These activities take up time that could be employed in policy implementation. Thus, there is dissipation of Navy energy as programs are replaced,

repackaged and remarketed to Congress. While postponement is an outcome of the implementation process, it also is a budget enactment tactic of both Congressional critics of programs and Navy resistors to program modification. Under either circumstance, continuity in policy formulation and implementation is lost.

b. Underperformance

As discussed in Chapter III, underperformance takes two forms: underestimation of technological risk determining a boundary of physical performance, and acceptance of less funding to insure program survival. The latter leads to less than desired military capability either directly through less flexibility to increase funding to offset other weaknesses, or through program stretchouts that result in fewer weapons procured. The intended achievement of military capability for the A-6F was postponed by Congressional action. The capability desired for the A-6F will not be operational within the timeframe envisaged. Moreover, the Navy is presented with little choice to restructure a plan to overcome this failing. The service appears justified in the perception that its independence to pursue weapon acquisition programs was curtailed by both Congress and OSD pressure.

c. Cost-overruns

The A-6F was not a victim of this dysfunction in its design stage. But life-cycle cost estimates did

escalate from \$1 billion in 1983 to \$6.5 billion in 1988. The SASC cited this circumstance in justifying its position on the aircraft's affordability. The service would likely stretch-out the procurement, perhaps reducing the planned procurement to less than 150 planes. The SASC thought it likely that production rates would fall below the economic level and the program would require diversion of funding from more important areas such as the ATA. The Navy was unable to answer this criticism satisfactorily.

There are many examples where strategies have been employed unsuccessfully to attempting to avoid the pitfall of cost-overruns. Recent illustrations include the Army's Aquila Remotely Piloted Vehicle, the Navy's Fiscal Year 1989 Submarine Combat System (FY89CS), and the joint Navy/Air Force Advanced Medium Range Air-To-Air Missile (AMRAAM) [Ref. 43:pp. 20, 62, 80]. The interlocking constraints of performance, schedule and cost are evident in these examples. If a performance parameter is less than expected, the service must decide if restoration to the desired level is required. If the answer is affirmative, this decision often translates into increased expenditure and lengthened production schedules. As costs mount, so does Congressional criticism of program management; at times the program is terminated.

3. What Specific Responses Has the Navy Made to Congressional Attempts to Influence the Management of the A-6F Acquisition Program?

The Navy responded with a broad assault upon the initial Congressional concern over multiple low turn-out production lines. The service countered by demonstrating that it shared the same concerns for financial savings. In particular, the FFP contract, the life-cycle savings from enhanced maintainability and reliability, the use of NDI and the employment of commonality with other aircraft systems were all features of the procurement program emphasized in testimony.

The Navy justified the aircraft as necessary to carry out defense policy objectives for strike warfare, to bridge the operational gap to the new ATA. The changing requirement for more A-6's in the carrier air wing was based on the operational requirement to carry out strike missions. Low production rate of naval aircraft similarly met policy objectives to replace lost airplanes and provide for surge production capacity in wartime.

When the A-6F was ready to transition to production, the Navy initially tried to exploit the conflict between Armed Forces and Appropriations Committees over the proposed force structure and affordability issues. But ambivalence within the Navy concerning the primacy of the ATA program prevented a vigorous argument to OSD. Secretary Carlucci marked the aircraft from the proposed FY 89 budget as a

result of loss of Congressional and OSD support, with the apparent intention of effectively terminating the program.

4. What Lessons Has the Navy Learned from Congressional Review and Oversight of the A-6F Program?

The Navy concludes that the lack of a united DOD position on the A-6F, the scarcity of budgetary resources, and the meddling of Congress and other organizations spelled the death of the program. An alternative perspective is that the inability to effectively settle the production line issue, to communicate to Congress and OSD the operational requirement so as to make the plane seem affordable, and the carry-over of weaknesses of the predecessor A-6E aircraft were major causes for Congress' reluctance to authorize production.

C. CONCLUSIONS

Conclusions are grouped in three areas: those that pertain to Congressional controls in general, those that apply to Navy responses, and those concerning the A-6F acquisition.

1. Conclusions Regarding Congressional Control and Their Use

a. The Dissipation of Energy

Congress dissipates its own and agency political energy in attempting to control Executive budget and implementation decisions. Endless rounds of negotiation, bargaining and compromise appear at times not to lead to a

coherent statement of national objectives that link logically to past decisions. Rather, Congress often has a foreshortened view of the future, the illusion of dealing with long term concerns when occupied with short term interests. At times energy is not channeled into careful deliberation of the outputs of the budget, but is squandered on haggling over inputs. Enhancing this characteristic are the constraints of annual budgeting, demise of the seniority system, the proliferation of committees seeking control, and the overlay of new budget procedures upon the old. As long as political energy is wasted in deliberations over resource inputs, decisions will be delayed and resource decision issues will be uncertain.

b. Opportunism

Congress is opportunistic and often ready to advance the agendas of individual Members. Members and staff scrutinize programs to exploit weaknesses, or alternatively avoid weaknesses depending on their perceived gains or losses. Program managers and administrators are subjected to intense examination concerning operational problems. The opportunistic nature of Congress leads to an atmosphere of mistrust wherein participants in the policy implementation process maneuver to avoid blame and responsibility for programmatic outcomes.

c. Unintended Consequences of Micromanagement

Congressional micromanagement leads to unintended effects. As more of the budget is debated and approved in highly detailed line item format, Members tend to lose the perspective of national interest in seeking to advance special constituent concerns. Major program and policy issue debates are delayed and then become submerged under mounds of budget data. Congress then complains that it has not had enough time to adequately deliberate, passes an Omnibus Appropriation Act, and leaves it to the Executive to resolve mismatches in authorization and appropriations.

d. Fragmented Decision Making

Congress makes budget and control decisions in a fragmented rather than unified manner. Differences between committees are highlighted in line item review. Confusion on the part of Executive agencies about Congressional intentions occurs when mismatches in authorization and appropriation are present. Agencies then attempt to exploit the differences by playing Committees against each other. Temporarily, program stability and survival may be assured for another round of budget formulation. But, as in the A-6F case, fragmentation provides the opportunity for other participants to change positions.

2. Conclusions Regarding Navy Responses to Congressional Control

a. Program Merits

Programs do not stand solely on their own technical merits. The strongest technical justifications must be matched with political strategies to withstand buffeting pressures during budget deliberation and enactment. The process is closely akin to a private sector marketing effort, putting together the winning mix of price, product, promotion, and distribution in the form of cost, weapon performance, legislative selling points, and geographic spreading of governmental largess. Surrounding all of this strategy is the political atmosphere of bargaining, persuasion and compromise wherein agencies and individuals advance their own goals in tandem with programmatic requirements.

b. Factors That Terminate Programs

Defense programs appear to be constrained or terminated not by one overwhelming factor, but by a combination of elements in the political process. Congressional pressure to seek alternative policies can find an ally to OSD reluctance to challenge Congressional decisions. Alternatively, OSD's desire to foster harmony with Congress can oppose the Navy's desire to pursue an independent course of action. In either case, OSD may step out of its role as reviewer and defender of service programs

to terminate policy implementations as an expression of its unwillingness to arbitrate between the service and Congress, as shown by the A-6F example.

Another factor is the growth trend of the budget. In times of defense budget growth that is sanctioned by all parties, programs are more likely to be approved than denied. Alternatively, as budgets decrease, the probability of uniform agreement collapses, in accordance with the change of political agendas of some participants.

c. Measures of Programmatic Success

Acceptance of underperformance, delay and escalating cost in relation to original intentions are symptoms of programmatic dysfunction. Strategies are developed to overcome these negative outcomes and measures of programmatic success are tailored in relation to them. As a result, effective programs are those that have been around the longest, perform as anticipated, and do not exceed cost projections. Executive agency focus, as well as that of Congress, remains fixed upon input of resources instead of upon output to national defense. The result is distortion of the implementation process to reflect not the measurement of policy outcomes, but the measurement of inputs. Moreover, the opportunities for micromanagement multiply as do unintended consequences of control.

3. Conclusions Regarding the A-6F Case Example

a. The Implementation Process

The A-6F case illustrates the implementation process as an assembling of strategy components to achieve objectives. The Navy assumed the leading position, soliciting the participation of OSD and Congress. OSD and Congress then sought to control the terms of their cooperation. The Navy employed several strategies to gain their supportive participation, to overcome organizational resistance, to retain its autonomy, and to insure programmatic survival.

b. Specific Budget and Control Procedural Problems

The A-6F case illustrates problems of program implementation decision procedures. The two-step authorization-appropriation enactment of budgets leads to Congressional micromanagement, fragmented decision making, duplicative review, mismatch of legislation, limited focus, and institutional conflict. The result of the Navy's failure to overcome these difficulties is delay or inability to introduce an aircraft that meets the established operational requirement for an all-weather medium attack airplane.

c. Program Implementation Politics

The A-6F case illustrates the politics of program implementation. Program goals expand to include the political agendas of the participants. Project stability

and survival are more likely when congruence in political goals is achieved. But, absolute agreement may not be necessary if political support from one organization may be used to offset or substitute for the opposition of another. In the clash surrounding hegemony over Navy force structure decisions, the Navy was unable to exploit its alliance with the HAC. OSD then advanced its own objective to seek greater political harmony with the SASC by terminating the A-6F.

D. AREAS FOR FURTHER RESEARCH

1. Application of the Policy Implementation Model to Other Categories of Budget Execution

The suitability of the implementation model developed in this study to describe other areas of budget execution may be explored. This includes identification of implementation strategies employed in programs within the operations and maintenance accounts, the stock funds, and the industrial funds. This research should provide further insight to the political process of budget execution.

2. Developing a Normative Approach to Policy Implementation

Through research to identify the components of successful policy implementation, decision makers in the Executive branch will be better able to structure programs and marketing strategies. Furthermore, they may learn to avoid the weaknesses that have led to programmatic failure.

3. Expanding Research to Include the Influence of Industry and Special Interest Groups in Policy Implementation

This thesis focused on a limited number of participants in policy implementation. Other organizations, including industry and special interest groups, play an active role in shaping programs. Their contributions should be explored so that the nature and scope of their influence is better understood.

4. The Affects of Intra-organizational Relationships Upon Program Implementation

The institutional conflict between Armed Services and Appropriations Committees of Congress was discussed in this thesis. Similarly, the Navy and OSD are large organizations composed of smaller groups that wield significant power in designing, justifying and implementing policy initiatives. Further research to apply the implementation model may improve its applicability and advance the definition of proper intra-organizational relationships in successful budget execution.

5. Examination of the Influence of Other Acquisition Design Strategies Upon Program Implementation

This thesis examined only a few of the possible strategies that may be employed in the design and implementation of acquisition programs in the budget process. Alternative strategies involving concurrency, product warranties, cost analyses (e.g., design-to-cost, should-cost, could-cost), and preplanned product improvement

also may be explored. Decision makers, armed with superior information and strategies, will be better able to make intelligent choices in constructing programs that address both the political and operational concerns of participants in the policy implementation process.

APPENDIX A

SUBCOMMITTEE ALIGNMENT OF THE HOUSE AND SENATE
ARMED SERVICES AND APPROPRIATIONS
COMMITTEES

Senate Armed Services Subcommittees	House Armed Services Subcommittees
Conventional Forces and Alliances Defense	Investigations
Defense Industry and Technology	Military Installations and Facilities
Manpower and Personnel	Military Personnel and Compensation
Projection Forces and Regional Defense	Procurement and Military Nuclear Systems
Readiness, Sustainability and Support	Readiness
Strategic Forces and Nuclear Deterrence	Research and Development
	Seapower and Strategic and Critical Materials
	Acquisition Policy Panel
	Defense Policy Panel

Senate Appropriations
Subcommittees

Agriculture, Rural Develop-
ment and Related Agencies

Commerce, Justice, the Judi-
ciary and Related Agencies

Defense

District of Columbia

Energy and Water Development

Foreign Operations

HUD-Independent Agencies

Interior and Related
Agencies

Labor, Health and Human
Services, Education and
Related Agencies

Legislative Branch

Military Construction

Transportation and Related
Agencies

Treasury, Postal Service
and General Government

House Appropriations
Subcommittees

Commerce, Justice, State
and Judiciary

Defense

District of Columbia

Energy and Water Developmen

Foreign Operations

HUD-Independent Agencies

Interior and Related
Agencies

Labor-Health and Human
Services-Education

Legislative

Military Construction

Rural Development, Agricul-
ture and Related Agencies

Transportation and Related
Agencies

Treasury-Postal Service-
General Government

SOURCE: 1987-1988 Official Congressional Directory

APPENDIX B

CHRONOLOGY OF THE EXTENSION OF ANNUAL AUTHORIZATION TO DEFENSE APPROPRIATIONS

1958 and prior--DOD appropriations permanently authorized.

1959--(PL 85-436) to require the annual authorization for procurement of aircraft, missiles, and naval vessels.

1962--(PL 87-436) to require the authorization of appropriations for research, development, test or evaluation associated with aircraft, missiles, and naval vessels.

1963--(PL 88-174) to require the authorization of appropriations for the procurement of tracked combat vehicles.

1967--(PL 90-168) to require the annual authorization of the personnel strengths of each of the Selected Reserves.

1969--(PL 91-121) to require the authorization of appropriations for the procurement of other weapons.

1970--(PL 91-441) to require the authorization of appropriations for the procurement of torpedoes and related support equipment and to require annual authorization of the active duty personnel strengths of each component of the Armed Forces.

1973--(PL 92-436) to require the annual authorization of the average military training student loads of each component of the Armed Forces.

1973--(PL 93-155) to require the annual authorization of civilian end-strengths.

1975--(PL 94-106) to require the annual authorization of military construction of ammunition facilities.

1977--(PL 95-91) to require the Armed Services Committees with jurisdiction over the national defense programs of the Department of Energy.

1980--(PL 96-342) to require the annual authorization of funds for operation and maintenance of the Department of Defense and its components.

1982--(PL 97-86) to require the annual authorization of appropriations of funds for the procurement of ammunition and so-called "other" procurement.

1983--(PL 98-94) to require the annual authorization of appropriations for working-capital funds.

ADAPTED FROM: Committee on Armed Services, U. S. Senate
Staff Report 99-86, Defense Organization:
The Need for Change

APPENDIX C

BUDGET LEGISLATIVE CALENDAR

First Monday after
3 January. President submits his budget

15 February CBO submits report to the
Budget Committees on alterna-
tive sources of revenue, budget
authority and outlays

25 February Authorizing and Appropriations
Committees submit views and
estimates to Budget Committees

1 April. Senate Budget Committee reports
Concurrent Resolution to the
Senate

15 April. Congress completes action on
concurrent resolution on the
budget

15 May. Annual appropriations bills may
be considered in the House

10 June HAC reports last annual appro-
priations bill to the House

15 June Congress completes action on
reconciliation legislation

30 June House completes action on an-
nual appropriation bills

1 October. New fiscal year begins

ADAPTED FROM: U. S. Senate Document 100-4, Standing Rules of
the Senate and Congressional Budget and
Impoundment Control Act of 1974, as amended,
p. 58

APPENDIX D

NATIONAL DEFENSE AUTHORIZATION ACT FOR FISCAL YEARS 1988 AND 1989
CONFERENCE REPORT
(EXTRACT)

(AMOUNTS IN THOUSANDS)

	FY 1988		FY 1988	
	BUDGET REQUEST	HOUSE PASSED	BUDGET REQUEST	HOUSE PASSED
	QTY	AMOUNT	QTY	AMOUNT
COMBAT AIRCRAFT				
BA-1 COMBAT AIRCRAFT				
1. A-6E/F (ATTACK) INTRUDER (MYP)	12	702,244	12	702,244
2. A-6E/F (ATTACK) INTRUDER (MYP) (AP-CY)	--	109,917	--	109,917
2a. A-6E/F UPGRADE RETROFIT		---		---
3. EA-6B (ELECTRONIC WARFARE) PROWLER	6	336,062	12	482,772
4. EA-6B (ELECTRONIC WARFARE) PROWLER (AP-CY)	--	17,826		22,713
5. AV-8B (V/STOL) HARRIER	32	564,159	0	0
6. AV-8B (V/STOL) HARRIER (AP-CY)	--	64,040	--	0
7. F-14A/D (FIGHTER) TOMCAT	12	676,764	12	676,764
8. F-14A/D (FIGHTER) TOMCAT (AP-CY)	--	84,289	--	129,103
9. F/A-18 (FIGHTER) HORNET (MYP)	84	2,316,610	84	2,316,610
10. F/A-18 (FIGHTER) HORNET (MYP) (AP-CY)	--	155,982	--	155,982

(AMOUNTS IN THOUSANDS)

FY 1988 SENATE PASSED		CONFERENCE AGREEMENT		RECOMMENDATION		CONTINGENCY LEVEL	
QTY	AMOUNT	CHANGE FROM REQUEST QTY	AMOUNT	QTY	AMOUNT	CHANGE FROM REQUEST QTY	AMOUNT
0	0	(12)	(702,244)	0	0	(12)	(702,244)
0	0		(109,917)	--	0	--	(109,917)
	---	11	376,610	11	376,610	--	---
12	482,762	6	146,710	12	482,772	6	146,710
--	17,826		4,887	--	22,713	--	4,887
32	591,650	(8)	(136,407)	24	427,752	(32)	(564,159)
--	64,040		(16,010)	--	48,030	--	(64,040)
12	676,764			12	676,764	--	---
--	84,289			--	84,289	--	---
84	2,316,610			84	2,316,610	--	---
--	155,982			(84)	155,982	--	---

(AMOUNTS IN THOUSANDS)			
RECOMMENDATION		CONTINGENCY LEVEL	
QTY	AMOUNT	QTY	DIFFERENCE AMOUNT
0	0		
	0		
0	0	(11)	(376,610)
12	482,772		
	22,713		
	0	(24)	(427,752)
	0		(48,030)
12	676,764		
--	84,289		
84	2,316,610		
(84)			

ITEMS OF SPECIAL INTEREST

Navy Aviation

The conferees reviewed the Navy's plans in aviation modernization in considerable detail. The conferees note that there are serious affordability problems in Naval aviation both in near and long term. Despite the fact the Navy decided to accelerate the procurement of aircraft carriers in fiscal year 1988, it chose to reduce the procurement of combat aircraft. Compared to last year's five year plan, this year's five year plan removed a third of all planned procurement of combat aircraft. The Navy has many combat aircraft in production at inefficient production rates. While this situation is serious in its own right, it is disastrous in the face of impending budget reductions.

The House and Senate took substantially different approaches to solving these problems. The Senate reviewed all programs and determined that there were insufficient funds to support both an Advanced Technical Aircraft (ATA) and a block upgrade version of the A-6, the A-6F. The Senate fully funded the ATA and terminated the A-6F, primarily because the A-6F is vulnerable due to its large radar cross section. The ATA will be a survivable aircraft designed to accomplish the same missions as the A-6.

The House determined that the A-6F should be fully funded because the A-6 series aircraft is the Navy's only all weather medium attack aircraft and is required over the next five years to outfit air wings for expanded carrier force structure. The House effectively terminated the ATA because it determined that a major new program is not affordable in the present budget situation, and because a delay in the program might help resolve several technical uncertainties.

The House also terminated further procurement of the Marine Corp's AV-8B light attack aircraft. The House questioned whether the AV-8B offered sufficient military value to justify the cost of continued procurement in an era of shrinking defense budgets. The House concluded that its limited payload, high maintenance requirements and lack of radar, limit its combat utility. Further, the House noted the Administration's plans to stretch out the production rate starting in fiscal year 1990 adds four years to the program and increases unit costs by as much as 80 percent toward the end of the program.

After considerable negotiation, the conferees adopted the following outline for the future of Navy aviation. First, the conferees recommend full authorization for the Advanced Tactical Aircraft. Second, the conferees terminated further development or procurement of the F model of the A-6. The conferees included a provision (sec. 112(f)) which prohibits

the Secretary of the Navy from obligating any funds for purposes of developing or procuring an F model A-6.

In its place, the conferees recommend an authorization of \$376.6 million that is available at the discretion of the Secretary of the Navy either to procure 11 E models of the A-6, or to initiate a retrofit program for the existing fleet of A-6s. The conferees emphasize that the Navy must at some time initiate a program for upgrading the existing fleet of A-6s, since those aircraft will have to remain in Navy inventories for the next twenty years. The funds provided this year, however, are available at the discretion of the Secretary of the Navy either to initiate that upgrade program or to procure E model A-6s. The conferees also recommend an authorization of \$475.5 million for 24 AV-8B aircraft, including advance procurement for fiscal year 1989.

The conferees also direct the Navy to initiate a program to develop a two-seat, all weather ground attack variant of the F/A-18s, and provided \$40 million to initiate that upgrade program. The primary initial emphasis of this program should go to improving the radar on the F/A-18s. The Navy also should consider growth versions of the existing engine that will enable it to meet the threat of the 1990's and beyond. Once the two-seat F/A-18 becomes available, it should be fielded with the Marine Corps initially, so that the A-6s in the Marine Corps shall be freed to transfer to Navy medium attack squadrons.

These programs figured prominently in the conferees deliberations for funding at the contingency level. At the contingent level, the conferees recommend termination of both the A-6 program and the AV-8B program.

The conferees note that the Navy is facing long-term serious financial constraints. It has too many combat aircraft in production at inefficient production rates. Further, several major new programs--such as the F-14D, the V-22, the Long Range ASW Capable Aircraft (LRACA), and the ATA will require substantial increases in funding in upcoming years. In light of these financial constraints and the need to preserve modernization, the conferees determined that the A-6 and the AV-8B programs should be terminated at the contingent funding level.

In order to maintain modernization at the contingent funding level, the conferees direct the Navy to negotiate a multiyear contract for purposes of procuring F/A-18 aircraft, at a rate of 84 aircraft per year. The conferees note that section 2306 of title 10, United States Code, requires stable configuration as a prerequisite for entering into multiyear contracts. The conferees believe that the Secretary of the Navy should enter into a multiyear contract for the F/A-18s even though the contract may cover both the current version and the upgraded ground attack version. The

conferees note that the multiyear contract for F-16s involves both single seat and two-seat variants.

A-6E/F attack aircraft (Intruder)

The budget request contained \$702.2 million for procurement of 12 A-6F aircraft in fiscal year 1988, \$109.9 million for advance procurement of 18 A-6f aircraft in fiscal year 1989, and \$41.1 million for procurement of initial spares.

The House bill would authorize the amounts requested. The Senate amendment would deny authorization for the A-6F.

The conferees are concerned that new start procurement of the A-6F, at the same time a significantly more capable successor aircraft (advance Tactical Aircraft (ATA)) is under development, is both unaffordable and inconsistent with a declining defense budget.

Further, the conferees believe the Navy should consider extending the service life and upgrading existing A-6 aircraft in lieu of continued A-6 procurement to more cost-effectively satisfy midterm force level requirements.

Accordingly, authorization for A-6F aircraft is denied. Instead, the conferees recommend authorization of \$376.6 million to procure 11 A-6E aircraft in fiscal year 1988 and \$41.1 million for initial spares, or, \$376.6 million to begin a service life extension and upgrade program for existing A-6 aircraft, whichever the Navy decides is most beneficial.

ADAPTED FROM: U. S. House of Representatives Report
100-446, National Defense Authorization Act
For Fiscal Years 1988 and 1989. Conference
Report to accompany H.R. 1748, pp. 300-301,
306-308.

APPENDIX E
CONGRESSIONAL REQUESTS
FOR
INFORMATION ON DEFENSE ACTIVITIES

	ANNUAL AVERAGE		
	1973-76	1977-80	1981-84
HEARINGS	407	496	456
COMMITTEES REQUESTING HEARINGS	47	79	84
SECDEF APPEARANCES AT HEARINGS	19	25	17
DOD WITNESSES	1,171	1,744	1,306
DOD WITNESSES PER HEARING	2.9	3.5	2.9
DOD WITNESSES' TESTIMONY HOURS	2,515	1,443	1,420
WRITTEN INQUIRIES	145,940	95,185	101,305
TELEPHONE INQUIRIES	660,385	389,336	593,163
BRIEFINGS	972	971	1,333
BRIEFING HOURS	1,696	1,409	1,432
PAGES IN BUDGET JUSTIFICATION BOOKS	11,927	16,636	22,734

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SUMMARY OF INCREASES IN CONGRESSIONAL DIRECTIONS TO DOD

FISCAL YEAR	NUMBER OF YEARS	ANNUAL AVG INCREASE IN REPORTS/STUDIES	ANNUAL AVG INCREASE IN PROVISIONS IN LAW
1970-1982	13	14	36
1983-1986	4	88	115

ADAPTED FROM: GAO Report GAO/NSIAD-86-65BR, DOD Acquisition
Programs: Status of Selected Systems, pp.
3-11

APPENDIX F

MEMBERS OF THE DEFENSE ACQUISITION BOARD (DAB)

Under Secretary of Defense for Acquisition (Chair)
Vice Chairman, Joint Chiefs of Staff (Vice Chair)
Service Acquisition Executive, Army
Service Acquisition Executive, Navy
Service Acquisition Executive, Air Force
Assistant Secretary of Defense (Comptroller)
Assistant Secretary of Defense (Production and Logistics)
Assistant Secretary of Defense (Program Operations)
Director of Defense Research and Engineering
Director of Program Analysis and Evaluation
Chairs of Acquisition Committees, as appropriate.

SOURCE: Department of Defense Instruction 5000.49, Subj:
Defense Acquisition Board, p. 2

APPENDIX G

LESSONS LEARNED BY DOD WITNESSES

Political science is a contradiction in terms

On Capitol Hill, perceptions are realities. If Congress perceives something, it is a fact.

Know your committees and how they are organized and operate. No two are alike.

A staffer perceives a program and its program manager as taking on the same character. A poor program reflects on its manager, and vice versa.

Don't play games, waffle or be inconsistent with something you or others have said previously.

Handle things promptly and quickly.

Respond equally as fast and efficiently to all Members of Congress regardless of party or ideology. Even minority Members wield influence on issues through networking and committee work.

The bulk of public business does not take place in public, such as hearings on the floor. Understand how things are done.

Use language Members can understand. Avoid being too technical or detailed unless specifically asked.

Be candid, truthful. Credibility is one of the program manager's biggest assets on Capitol Hill.

Recognize there are a number who will probably vote against defense most of the time, and a number who will vote for. Some need to be convinced each time.

Congress doesn't really change the thrust of the DOD budget. It plays on the margins with a little here and there.

Don't be lead to believe the staff runs Congress, in spite of what you see as their role and influence. The Members do.

RDT&E and procurement appropriations have constituencies. (They make things.) Operations and maintenance does not.

Be careful of what is written, especially if you write it. Things have a way of getting to Capitol Hill.

Do it verbally when you can.

Don't go to Congress and spill your soul. Show restraint, but do not hedge. It is easier to add information than subtract.

Recognize the myriad agendas attempting to be carried out: state, district, party, caucus, defense committee, personal. Understand the motivations.

The military eyes cannot look for blacks and whites, right and wrongs, all or nothing, as may be customary.

Tradeoffs and compromise form the basic political process in Congress.

Let a sleeping dog lie if all is going well on your program.

The ideal situation for a program manager: nobody knows he's there, and he gets what he asks for. Try to stay low, work the system properly, and keep the right people informed.

SOURCE: Congressional Involvement and Relations. A Guide for Department of Defense Program Managers, pp. 6-7

APPENDIX H

PRODUCTION RATES OF SELECTED AIRCRAFT

TYPE AIRCRAFT	AVG PRODUCTION RATE 1983-87	MIN SUSTAINING PRODUCTION	MIN ECONOMIC PRODUCTION	MAX ECONOMIC PRODUCTION
AV-8B	34	30	36	72
A-6E	8	6	12	72
F/A-18	84	36	84	145

ADAPTED FROM: Aviation Week & Space Technology, 30 March 1987, p.
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